

PHONE AND EMAIL COMMUNICATION WITH INDUSTRY ON THE GLASS MANUFACTURING AREA SOURCE STANDARD

NAME	Bob St. John	DATE	5 OCT 07
COMPANY	Libbey Glass		
CITY/STATE	US-WIDE	PHONE	419-727-2493
<p>They make colored glass at one plant. The melted glass enters the lehr and then goes to the forehearth. They do not use Glass Manufacturing HAPs in the melting <u>furnace</u> but the frit does contain some Glass Manufacturing HAPs.</p> <p>They buy the frit as a manufactured glass product. The frit is added at the forehearth after the glass has been extruded from the melter, it is not added to the melting furnace. Frit is a pre-vitrified product and does not release HAP the way raw minerals do. Frit melts at a much lower temperature than the typical glass manufacturing raw materials. There are no Glass Manufacturing HAPs added to this melting furnace.</p>			

NAME	Mark Tussing	DATE	9 OCT 2007
COMPANY	Owens-Illinois		
CITY/STATE	US-WIDE	PHONE	567.336.8682
<p>1) Regarding repair and rebuild of furnaces.</p> <p>Under the proposed rule, the compliance date for new furnaces is upon startup. O-I does not have sufficient time to plan for new controls on furnaces they are currently reconstructing. They have repairs coming up on furnaces in April 2008. O-I suggested they would need additional time to install controls, and requested that the rule be modified to allow them to operate this furnace and add the APCD within a year.</p> <p>O-I suggests EPA make an allowance in the rule for an affected source reconstructed within the first year of the rule: such sources would have a year from promulgation of the final rule to comply in order to be able to engineer the new furnace with a new APCD.</p> <p>2) Regarding recipe changes:</p> <p>The rule is silent when furnace goes from melting glass containing no Glass Manufacturing HAPs, to a recipe that contains Glass Manufacturing HAPs. This happens when O-I changes the color of their glass. O-I suggested the rule be adjusted so that a glass plant only has to do recordkeeping and reporting when melting a recipe containing Glass Manufacturing HAPs.</p>			

NAME	CONFERENCE CALL	DATE	9 OCT 2007
COMPANY	Gene Weekley, Blenko Glass, Milton WV Brandon Byer, Spectrum Glass, Woodenville, WA Eric Durren, Bullseye Glass, Portland, OR		
CITY/STATE	As noted above	PHONE	
<p>Three companies in the Stained Glass Industry (Spectrum Glass, Blenko Glass and Bullseye Glass) called to describe their manufacturing processes.</p> <p>Spectrum uses electrodes in their continuous furnace to melt the glass. It is a 'cold top' continuous furnace.</p> <p>Bullseye glass makes 200 different formulas of glass in 17 different tank and pot furnaces. They limit emissions using management practices such as reducing the temperature during charging, dampening the batch, screw conveyors to introduce the batch, bagging the raw materials into kraft paper and placing into the cold furnace, and they conduct monitoring of employees.</p> <p>Blenko is a tourist attraction. They make only one recipe that contains Glass Manufacturing HAPs, and that is cadmium. They make this glass infrequently. They also make blown glass.</p> <p>All the stained glass manufacturers are small businesses.</p> <p>The batch furnaces are cleaned and charged in cycles. A batch of glass melts in 8-14 hours depending on the recipe. It is pulled out of the pot or tank by ladles or a tap at the bottom of the furnace and rolled out into a sheet. Pot and tank furnaces have a 2-year life cycle.</p>			

NAME	Eric Durren	DATE	10 OCT 2007
COMPANY	Bullseye Glass		
CITY/STATE	Portland, OR	PHONE	503.232.8887 x 103
<p>Bullseye Glass called to provide additional information beyond what was discussed during the conference call. Bullseye Glass is the second largest producer of stained glass in the US. The glass is made in small batches in periodic furnaces. They operate many small periodic furnaces and have some batches of glass that have glass manufacturing HAPs in them.</p> <p>They make under 450 tons per year of glass that contains glass manufacturing HAPs. The HAPs they use are highly purified and expensive; they are mostly retained in the melt. None of their batches contain lead or arsenic.</p> <p>Throughout the stained glass industry, stained glass is made by batches, not in continuous furnaces the way flat glass is made. They hand-ladle the glass out of the furnace and place the molten glass onto one of three types of rollers to make sheets of glass.</p> <p>Because they melt the glass in small periodic furnaces, the cost effectiveness of additional control equipment would be prohibitive.</p>			

NAME	Brandon Byer	DATE	10 OCT 2007
COMPANY	Spectrum Glass		
CITY/STATE	Seattle, WA	PHONE	425.483.6699 X 4605

Spectrum Glass contacted us to provide additional information on the Stained Glass industry and to comment on the proposed rule. Spectrum Glass is the largest stained glass manufacturer in the US. Spectrum has different production processes from the rest of the industry and several furnaces have fabric filter (baghouse) controls in place. They operate one continuous furnace and the rest are batch furnaces; in all they have 10 large furnaces and use 3 different processes to press the glass. They hand ladle the molten glass out of most of the pot and tank furnaces and place it on roller to make sheets. One furnace taps from the bottom of the furnace to remove the molten glass onto the rollers.

Their one continuous furnace (the 'cold top' furnace) is uncontrolled because the State has determined that emissions are so low additional control is not needed.

NAME	Eric Durren	DATE	11 OCT 07
COMPANY	BULLSEYE GLASS		
CITY/STATE		PHONE	

He is sending comments to the docket and some CBI information to the CBI office. He believes a distinction should be made to the rule between periodic (i.e., pot and tank) furnaces and continuous furnaces.

NAME	Mike Ferguson	DATE	15 OCT 2007
COMPANY	ERGO Resource Management		
CITY/STATE		PHONE	574.457.8020

They make a type of stained glass called opalescent glass which is produced in pot furnaces.

Their glass furnace is indirectly heated and ERGO asks whether this would be subject to the rule.

There is no stack from the melting area (from which they could measure emissions). There is only a door to charge, and a forehearth when it comes out in a molten state. There is no vent to exhaust the fumes.

NAME	Brandon Byhre	DATE	17 OCT 07
COMPANY	Spectrum Glass (VIA EMAIL)		
CITY/STATE	Seattle, WA	PHONE	425.483.6699 X 4605

This email was received from Spectrum Glass:

Hi Susan,

I have spoken with Eric Durrin of Bullseye glass about your thoughts on the changes to the new rule. Below is Eric's interpretation of the new rule:

"Susan expects to add a clarification to the proposed rule to state that the new regulation would exclude pot and tank furnaces (periodic furnaces). Effectively, the new rule would only apply to continuous furnaces. This change would leave the rule affecting the industries that were the true target of the proposed rule, and it would carve out businesses that were not intended to be in the scope of this effort."

I was actually shocked to hear about this and would like to discuss this with you. Periodic furnaces, in our experience, actually emit much more particulate and contaminant into the atmosphere than continuous furnaces. Our State Clean Air Agency required that we have baghouses for our periodic furnaces because of the emissions. Our continuous furnace which is well above the 50 ton/year threshold does not create any visible emissions; Our State Clean Air Agency has never had any concerns for this furnace emitting particulate. This furnace does not go to a baghouse. The furnace is kept at temperature through bottom power only. It always has a cold surface which minimizes any turbulence in the furnace, whereas periodic furnaces have a significant amount of turbulence.

In May we installed a new baghouse which was not sized for this particular continuous furnace. Our current baghouses do not have the capacity to accept this furnace.

Please give me a call when you get a chance we can discuss our options.

Thank you,

Brandon Byhre | Glass Engineering Manager | [Spectrum Glass Company](#)
P. 425-483-6699 x4065 F. 425-483-9007

To: Holsman, Marianne[Holsman.Marianne@epa.gov]; McLerran, Dennis[mclerran.dennis@epa.gov]; Pirzadeh, Michelle[Pirzadeh.Michelle@epa.gov]; Philip, Jeff[Philip.Jeff@epa.gov]; Koprowski, Paul[Koprowski.Paul@epa.gov]; Franklin, Richard[Franklin.Richard@epa.gov]; McClintock, Katie[McClintock.Katie@epa.gov]
Cc: DECONCINI Nina[DECONCINI.Nina@deq.state.or.us]; FLYNT Jennifer[FLYNT.Jennifer@deq.state.or.us]
From: Smith, Judy
Sent: Fri 2/12/2016 9:12:19 PM
Subject: FW: Portland Metals Emissions - EPA Desk Statement / Response to OPB inquiry Final

This is the final version of the desk statement for today! It was used for the headquarters response to OPB. Marianne and I will update as needed next week. Judy

Response to Oregon Public Broadcasting Inquiry

February 12, 2016

The Oregon Department of Environmental Quality found a significant “hot spot” of cadmium and arsenic during air sampling in Portland, Oregon near SE 22nd Ave. and Powell Blvd. DEQ is collecting additional air and soil samples in the affected area, and is working collaboratively with county, state and federal health agencies (Oregon Health Authority, Multnomah County Health Department, and the Agency for Toxic Substances and Disease Registry) to assess and mitigate impacts to public health. EPA is keeping fully informed about this developing situation and is ready to support and assist ODEQ as needed. EPA and ATSDR are evaluating these findings in relation to EPA health standards.

Additional information, including a link to air sampling data and a map of the affected area, can be found at: <http://www.deq.state.or.us/nwr/metalsemissions.htm>. DEQ's initial findings are that the monthly average is 49 times greater than the state air toxics benchmark for cadmium and 159 times the state air toxics benchmark for arsenic.

Questions and Answers

How is EPA involved and what is our role?

EPA Region 10 was briefed by DEQ one-week prior to their February 3, 2016 press release. DEQ is the lead agency for implementing the Clean Air Act in Oregon and we are supporting their efforts.

EPA Region 10 jointly inspected Bullseye Glass and Uroboros Glass facilities with DEQ on February 10, to better understand the processes being used and the pollution controls currently in place. This information will help us determine if further action is appropriate under EPA authority.

We are reviewing records to identify other potential sources in the affected area. Federal regional screening levels (RSL) are being compared with the DEQ state health benchmarks in relation to the amount of contamination found in the study to better understand the health impact. EPA continues to support the DEQ, OHA, MCHD and ATSDR efforts to assess, monitor and communicate information as it becomes available.

Are we determining or confirming the air pollution and/or the source?

ODEQ is keeping EPA informed of their actions to monitor the situation and exposure levels. DEQ conducted air monitoring at nearby schools and day care centers. DEQ is conducting additional air and soil sampling is getting underway. EPA is providing DEQ with additional high volume air sampling equipment and filters to support this effort.

What federal air regulations apply to glass manufacturing facilities?

EPA has three national standards that potentially apply to glass manufacturing plants. Whether a standard applies can depend on a number of factors, such as startup date, type of furnace, and the amount of glass produced.

- A National Emissions Standards for Inorganic Arsenic Emissions from Glass Manufacturing Plants (issued in 1986), which set emissions limits of 2.7 tons per year for arsenic, or 85 percent control for existing glass-melting furnaces; for new

- or modified glass melting furnaces, the limit is 0.44 tons or 85 percent control.
- Standards of Performance for Glass Manufacturing Plants (issued in 1980), which set performance standards to limit emissions particulate matter (PM). Limiting particulate matter also limits emissions of lead and other toxic metals.

A 2007 National Emissions Standard Hazardous Air Pollutants for Glass Manufacturing Area Sources, which sets emissions limits for plants that emit less than 10 tons a year of a single air toxic, or less than 25 tons a year of a combination of toxics. Manufacturers subject to the 2007 standards must meet either a PM limit of 0.2 pounds of PM per ton of glass produced, or a limit of 0.02 pounds of metal air toxics per ton of glass produced.

What type of pollution controls should glass manufacturers use?

Because glass melts at a very high temperature, a glass facility would need to use multiple steps to control their metal emissions – including changing the pollutants from a vapor to a particle using cooling or specialized sorbents and then removing the particles using a control device such as an electrostatic precipitator or a baghouse.

Design of controls for these facilities is customized and complex and may include multiple types of control equipment based on the types of glass the facility is making and the pollutants the processes emit.

Do we know any more about the USFS role or study mentioned in the news media?

The study was a collaborative effort between US Forest Service and DEQ to better understand the sources and distribution of toxic metals, including arsenic and cadmium, air pollution in Portland. EPA has requested a copy of the study as soon as it is published.

From: Franklin, Richard
Location: R10Sea-Room-12Maple/R10-Rooms-Service-Center
Importance: Normal
Subject: Declined: hold for bullseye conversation if necessary
Start Date/Time: Mon 2/8/2016 10:00:00 PM
End Date/Time: Mon 2/8/2016 11:00:00 PM

Will be out of town all week conducting inspections in central Washington

To: Smith, Judy[Smith.Judy@epa.gov]; Holsman, Marianne[Holsman.Marianne@epa.gov]; McLerran, Dennis[mclerran.dennis@epa.gov]; Pirzadeh, Michelle[Pirzadeh.Michelle@epa.gov]; Koprowski, Paul[Koprowski.Paul@epa.gov]; Franklin, Richard[Franklin.Richard@epa.gov]; McClintock, Katie[McClintock.Katie@epa.gov]
Cc: DECONCINI Nina[DECONCINI.Nina@deq.state.or.us]; FLYNT Jennifer[FLYNT.Jennifer@deq.state.or.us]
From: Philip, Jeff
Sent: Fri 2/12/2016 10:14:13 PM
Subject: RE: Portland Metals Emissions - EPA Desk Statement / Response to OPB inquiry Final

Thank you, Judy.

Note: Judy and Marianne will be out Tuesday, February 16th. If you need any media assistance, please feel free to contact me.

Jeff Philip

Public Affairs Manager, Region 10

206-553-1465

<http://twitter.com/EPAnorthwest>

From: Smith, Judy
Sent: Friday, February 12, 2016 1:12 PM
To: Holsman, Marianne <Holsman.Marianne@epa.gov>; McLerran, Dennis <mclerran.dennis@epa.gov>; Pirzadeh, Michelle <Pirzadeh.Michelle@epa.gov>; Philip, Jeff <Philip.Jeff@epa.gov>; Koprowski, Paul <Koprowski.Paul@epa.gov>; Franklin, Richard <Franklin.Richard@epa.gov>; McClintock, Katie <McClintock.Katie@epa.gov>
Cc: DECONCINI Nina <DECONCINI.Nina@deq.state.or.us>; FLYNT Jennifer <FLYNT.Jennifer@deq.state.or.us>
Subject: FW: Portland Metals Emissions - EPA Desk Statement / Response to OPB inquiry Final

This is the final version of the desk statement for today! It was used for the headquarters response to OPB. Marianne and I will update as needed next week. Judy

Response to Oregon Public Broadcasting Inquiry

February 12, 2016

The Oregon Department of Environmental Quality found a significant “hot spot” of cadmium and arsenic during air sampling in Portland, Oregon near SE 22nd Ave. and Powell Blvd. DEQ is collecting additional air and soil samples in the affected area, and is working collaboratively with county, state and federal health agencies (Oregon Health Authority, Multnomah County Health Department, and the Agency for Toxic Substances and Disease Registry) to assess and mitigate impacts to public health. EPA is keeping fully informed about this developing situation and is ready to support and assist ODEQ as needed. EPA and ATSDR are evaluating these findings in relation to EPA health standards.

Additional information, including a link to air sampling data and a map of the affected area, can be found at: <http://www.deq.state.or.us/nwr/metalsemissions.htm>. DEQ's initial findings are that the monthly average is 49 times greater than the state air toxics benchmark for cadmium and 159 times the state air toxics benchmark for arsenic.

Questions and Answers

How is EPA involved and what is our role?

EPA Region 10 was briefed by DEQ one-week prior to their February 3, 2016 press release. DEQ is the lead agency for implementing the Clean Air Act in Oregon and we are supporting their efforts.

EPA Region 10 jointly inspected Bullseye Glass and Uroboros Glass facilities with DEQ on February 10, to better understand the processes being used and the pollution controls currently in place. This information will help us determine if further action is appropriate under EPA authority.

We are reviewing records to identify other potential sources in the affected area. Federal regional screening levels (RSL) are being compared with the DEQ state health benchmarks in relation to the amount of contamination found in the study to better understand the health impact. EPA continues to support the DEQ, OHA, MCHD and ATSDR efforts to assess, monitor and communicate information as it becomes available.

Are we determining or confirming the air pollution and/or the source?

ODEQ is keeping EPA informed of their actions to monitor the situation and exposure levels. DEQ conducted air monitoring at nearby schools and day care centers. DEQ is conducting additional air and soil sampling is getting underway. EPA is providing DEQ with additional high volume air sampling equipment and filters to support this effort.

What federal air regulations apply to glass manufacturing facilities?

EPA has three national standards that potentially apply to glass manufacturing plants. Whether a standard applies can depend on a number of factors, such as startup date, type of furnace, and the amount of glass produced.

- A National Emissions Standards for Inorganic Arsenic Emissions from Glass Manufacturing Plants (issued in 1986), which set emissions limits of 2.7 tons per year for arsenic, or 85 percent control for existing glass-melting furnaces; for new or modified glass melting furnaces, the limit is 0.44 tons or 85 percent control.
- Standards of Performance for Glass Manufacturing Plants (issued in 1980), which set performance standards to limit emissions particulate matter (PM). Limiting particulate matter also limits emissions of lead and other toxic metals.

A 2007 National Emissions Standard Hazardous Air Pollutants for Glass Manufacturing Area Sources, which sets emissions limits for plants that emit less than 10 tons a year of a single air toxic, or less than 25 tons a year of a combination of toxics. Manufacturers subject to the 2007 standards must meet either a PM limit of 0.2 pounds of PM per ton of glass produced, or a limit of 0.02 pounds of metal air toxics per ton of glass produced.

What type of pollution controls should glass manufacturers use?

Because glass melts at a very high temperature, a glass facility would need to use multiple steps to control their metal emissions – including changing the pollutants from a vapor to a particle using cooling or specialized sorbents and then removing the particles using a control device such as an electrostatic precipitator or a baghouse.

Design of controls for these facilities is customized and complex and may include multiple types of control equipment based on the types of glass the facility is making and the pollutants the processes emit.

Do we know any more about the USFS role or study mentioned in the news media?

The study was a collaborative effort between US Forest Service and DEQ to better understand the sources and distribution of toxic metals, including arsenic and cadmium, air pollution in Portland. EPA has requested a copy of the study as soon as it is published.

To: Judy Smith[Smith.Judy@epa.gov]; McClintock, Katie[McClintock.Katie@epa.gov]; Koprowski, Paul[Koprowski.Paul@epa.gov]
From: Franklin, Richard
Sent: Thur 3/3/2016 4:55:06 PM
Subject: FW: NY Times article regarding Portland glass sites
[toxic-moss-in-oregon-upset.pdf](#)

From: Fowlow, Jeffrey
Sent: Thursday, March 03, 2016 8:54 AM
To: Heister, Dan <Heister.Dan@epa.gov>; Franklin, Richard <Franklin.Richard@epa.gov>
Cc: Field, Chris <Field.Chris@epa.gov>; Terada, Calvin <Terada.Calvin@epa.gov>; Moon, Wally <Moon.Wally@epa.gov>
Subject: NY Times article regarding Portland glass sites

Was in the front section of today's Seattle Times, as well.

Jeffrey Fowlow, PG, CHMM

Federal On-Scene Coordinator

U.S. Environmental Protection Agency

1200 Sixth Avenue, Suite 900

Seattle, WA 98101

EMAIL: fowlow.jeffrey@epa.gov

Office: 206-553-2751

Cell: 206-225-5582



The New York Times | <http://nyti.ms/1QMzzoj>

U.S.

Toxic Moss in Portland, Ore., Shakes City's Green Ideals

By **KIRK JOHNSON** MARCH 2, 2016

PORTLAND, Ore. — The 346 clumps of moss that science researchers from the United States Forest Service scraped from tree trunks and branches across this city looked as ordinary as moss gets — ancient, simple and common to the point of invisibility in the Pacific Northwest's palette of green.

But the moss had a riveting tale to tell, with shock waves that are still spreading.

Toxic heavy metals, notably cadmium, which can cause cancer and kidney malfunction, were detected in the samples, with high concentrations in particular around two glass factories in residential neighborhoods, both of which had used metals for coloring their products.

In a city that prides itself on being an environmental example to the world — from its throngs of bike commuters to its antisprawl development rules — the moss study results roared, producing an upheaval of surprise, anger and fear. Residents shouted or wept in public meetings last month, raging at state officials, who released the results and then found themselves blamed for not knowing what the factories were putting up their smokestacks.


On Tuesday, the director of Oregon's Department of Environmental Quality, Dick Pederson, resigned abruptly, saying he had health concerns that needed immediate care.

After the moss studies were released, local officials, who have said they are cautiously optimistic that public health impacts from the glass plants will in the end be minimal, raced in to take soil samples and set up air monitors. But residents near the plants were also cautioned last month to forgo, at least for now, even the spring rites of backyard gardening, until the test results can be further analyzed — a warning that sent another shiver through a city where “eat local” is almost a mantra.

“Because there is uncertainty, the gap is filled with fear,” said Dr. Paul Lewis, the Multnomah County health officer.

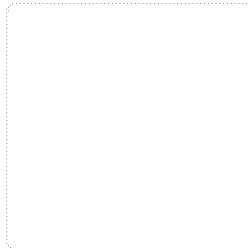
Residents like Sarah Livingstone, 41, who lives about five blocks from one of the glass factories, said the moss study and its consequences had changed her life.

“It’s the last thing I think of before I go to sleep and the first thing I think of in the morning,” said Ms. Livingstone. Her 15-month-old daughter, Clara Ritter, tested positive for arsenic, which sent off alarm bells in the family even though doctors said it was within a normal range. “I don’t know how we get back to normal,” added her husband, Rex Ritter, 48, in an interview in their living room.

**Rob Davis**
@robwdavis

Follow

Dick Pedersen, who shunned the spotlight once Portland's toxic pollution scare began, is out as @OregonDEQ director.
oregonlive.com/environment/in...
4:06 PM - 1 Mar 2016

**Dick Pedersen, Oregon's top en...**
Dick Pedersen, director of Oregon's Department of Environmental Quality, resigned Tuesday amid an
oregonlive.com

15 2

Even the Forest Service researchers who undertook the moss study — the first of its kind in the world, health experts and regulators said — were taken by surprise. The idea, they said, in keeping with their work for a federal agency that has “forest”

in its name, had been about demonstrating how trees add value in an urban setting. Measuring levels of pollution was not the goal of the research, let alone the discovery of a citywide grid of toxic hot spots.

“This wasn’t at all what we set out to find,” said Geoffrey Donovan, an economist who worked on the project with his research partner, Sarah Jovan, a moss and lichen expert.

The two glass companies, Uroboros Glass Studios and Bullseye Glass, both voluntarily stopped working with cadmium — used for making red, yellow and orange glass — and chromium, used in green and blue tints, after the moss results were announced in January.

But Daniel Schwoerer, a co-founder and the chief executive of Bullseye, said he thought glass-manufacturing might not be fully responsible. His factory, which opened in 1974 and has 140 workers, is also near a railroad yard, a cement plant and a metal-casting company.

“The D.E.Q. thinks we’re responsible — we don’t know,” Mr. Schwoerer said in an interview, referring to the Department of Environmental Quality. “But we’re going to do the right thing going forward.”

Oregon’s state epidemiologist and medical director of public health, Dr. Paul R. Cieslak, called the Forest Service study “genius” in looking where no one had ever thought to look. But the puzzle of science, anxiety and uncertainty that has resulted, he said, is messy.

And time consuming: The moss samples were gathered in late 2013, and the Forest Service team finished its analysis last May. The Department of Environmental Quality then did its own testing last fall to confirm what the moss was saying, and it released the results when they came in, in January.

“From a doctor’s standpoint, they always tell us, ‘Never order a test unless you know what you’re going to do with the result,’ ” Dr. Cieslak said. “Now we’re in this situation where we have all this data from the moss, and we’re left struggling to figure out what does it all mean.”

He said that because substances like cadmium are mainly considered risks to human health in long-term heavy exposures, and because the levels detected around the factories have so far been below the threshold of “acute,” the alarm for the moment is low. The state has said that people who want to check their own cadmium exposure could do so through a urine test with their physician — and that the state would pay for people who could not afford it — but results are just starting to come in.

“I think what we are going to end up telling people is that you are at some elevated risk, and the degree of elevation is likely to be small,” Dr. Cieslak said.

Environmental groups and legal experts said the long-term importance could be in the moss itself, as a relatively low-cost research tool. If plants can, in a way, speak of what they have absorbed, then a door has been opened to a whole new arena of pollution research.

“We are potentially at the tip of an iceberg,” said Wendy Wagner, a professor at the University of Texas at Austin School of Law who teaches environmental law. “With new tools of looking for things that we really haven’t looked for before, we’re going to be in for some surprises,” she added.

Federal air pollution laws have mostly focused on overall, or ambient, air quality — especially from emissions like carbon monoxide and lead. Metals and other toxics are less extensively monitored, Professor Wagner and other experts said, as are small companies like the two glass factories.

Portland residents like Mary Peveto said that to her, the revelation of the cadmium hot spots was no surprise. Ms. Peveto, a co-founder and president of a group called Neighbors for Clean Air, became involved in pollution issues here in 2008 after a study found that schools in Portland — including her daughter’s — had some of the worst results in the nation for industrial pollution deposits. That new hot spots are turning up all over again, she said, “shows that the system is still broken.”

Portland’s mayor, Charlie Hales, said he thought the shock from the moss study was compounded by Portland’s self-image as a city that can have it all: industry and blue-collar factory jobs, but also clean air and water.

“We are an example to the world of the green, sustainable city, and so it’s all the more dissonant,” Mr. Hales said.

Mr. Donovan and Ms. Jovan at the Forest Service, meanwhile, are already planning to replicate their study in a new city this spring: Cincinnati.

Doctors at Cincinnati Children’s Hospital Medical Center heard about the moss study and asked the researchers to go there and make a grid map like Portland’s, which will be cross-matched against health and development studies in children in various neighborhoods there.

“The first step is creating that map,” said Patrick Ryan, an associate professor of pediatrics at the center. “I haven’t seen anything like it before.”

A version of this article appears in print on March 3, 2016, on page A9 of the New York edition with the headline: Toxic Moss Sends Shivers Through Oregon City.

© 2016 The New York Times Company

To: McClintock, Katie[McClintock.Katie@epa.gov]; Fried, Gregory[Fried.Gregory@epa.gov]; Breneman, Sara[breneman.sara@epa.gov]; Dubose, Dick[DuBose.Dick@epa.gov]; Russo, Todd[Russo.Todd@epa.gov]; Maldonado, Zelma[Maldonado.Zelma@epa.gov]; Schaufelberger, Daniel[schaufelberger.daniel@epa.gov]; Prentice, Dakota[prentice.dakota@epa.gov]; Buettner, Robert[Buettner.Robert@epa.gov]; Spagg, Beverly[Spagg.Beverly@epa.gov]; Salazar, Matt[Salazar.Matt@epa.gov]; Sims, Mark[Sims.Mark@epa.gov]; Brahmbhatt, Roshni[brahmbhatt.Roshni@epa.gov]; Patel, Harish[Patel.Harish@epa.gov]
From: Froikin, Sara
Sent: Mon 2/22/2016 9:08:14 PM
Subject: RE: Colored Glass 114 Draft

Hi Folks,

Greg and I just heard that there may be some discussion with the Administrator regarding 114s for colored glass, so for anyone who was planning to send one out, please hold off actually sending it out the door until we hear back any thoughts the Administrator has on the matter. I think we'd hear within a couple days.

Thanks,

Sara Froikin, Attorney-Advisor

U.S. Environmental Protection Agency

290 Broadway

New York, NY 10007

Phone: 212-637-3263

From: McClintock, Katie

Sent: Friday, February 19, 2016 11:22 PM

To: McClintock, Katie <McClintock.Katie@epa.gov>; Fried, Gregory <Fried.Gregory@epa.gov>; Breneman, Sara <breneman.sara@epa.gov>; Dubose, Dick <DuBose.Dick@epa.gov>; Russo, Todd <Russo.Todd@epa.gov>; Maldonado, Zelma <Maldonado.Zelma@epa.gov>; Schaufelberger, Daniel <schaufelberger.daniel@epa.gov>; Prentice, Dakota <prentice.dakota@epa.gov>; Buettner, Robert <Buettner.Robert@epa.gov>; Spagg, Beverly <Spagg.Beverly@epa.gov>; Salazar, Matt <Salazar.Matt@epa.gov>; Sims, Mark <Sims.Mark@epa.gov>; Brahmbhatt, Roshni <brahmbhatt.Roshni@epa.gov>; Patel,

Harish <Patel.Harish@epa.gov>; Froikin, Sara <Froikin.Sara@epa.gov>
Subject: FW: Colored Glass 114 Draft

Sorry I have not had a chance to address Sara's comments yet, but here is my draft with her comments/edits.

Let me or Sara know if you have questions.

Katie McClintock

Air Enforcement Officer

EPA Region 10

1200 Sixth Avenue, Suite 900, OCE-101

Seattle, WA 98101

Phone: 206-553-2143

Fax: 206-553-4743

Mcclintock.katie@epa.gov

To: McClintock, Katie[McClintock.Katie@epa.gov]; Fried, Gregory[Fried.Gregory@epa.gov]; Breneman, Sara[breneman.sara@epa.gov]; Dubose, Dick[DuBose.Dick@epa.gov]; Russo, Todd[Russo.Todd@epa.gov]; Maldonado, Zelma[Maldonado.Zelma@epa.gov]; Schaufelberger, Daniel[schaufelberger.daniel@epa.gov]; Prentice, Dakota[prentice.dakota@epa.gov]; Buettner, Robert[Buettner.Robert@epa.gov]; Spagg, Beverly[Spagg.Beverly@epa.gov]; Salazar, Matt[Salazar.Matt@epa.gov]; Sims, Mark[Sims.Mark@epa.gov]; Brahmbhatt, Roshni[brahmbhatt.Roshni@epa.gov]; Patel, Harish[Patel.Harish@epa.gov]; Froikin, Sara[Froikin.Sara@epa.gov]
From: McClintock, Katie
Sent: Sat 2/20/2016 4:22:13 AM
Subject: FW: Colored Glass 114 Draft
[Colored Glass 114 Draft - sf 20-16-02-16.docx](#)

Sorry I have not had a chance to address Sara's comments yet, but here is my draft with her comments/edits.

Let me or Sara know if you have questions.

Katie McClintock

Air Enforcement Officer

EPA Region 10

1200 Sixth Avenue, Suite 900, OCE-101

Seattle, WA 98101

Phone: 206-553-2143

Fax: 206-553-4743

Mcclintock.katie@epa.gov

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

John O'Donnell
CEO
Kokomo Opalescent Glass
1310 South Market Street
Kokomo, IN 46902

Re: Supplemental Request to Provide Information Pursuant to Section 114 of the Clean Air Act

Dear Mr. O'Donnell,

The enclosed supplemental information request is being issued to you pursuant to Section 114 of the Clean Air Act (CAA), 42 U.S.C. § 7414. The Environmental Protection Agency is seeking additional information concerning Kokomo Opalescent Glass' facility in Kokomo, IN.

Under Section 114 of the CAA, EPA is authorized to require the submission of records, reports, and other information for the purpose of determining whether any violations of the CAA have occurred. In accordance with this authority, you are hereby served the enclosed Information Request, and required to provide the requested responses and documents within seven (7) days of receipt of this Request for questions 1-8. Provide the remaining responses within (30) days of receipt of this Request. See Enclosures 1 and 2 for the instructions, definitions, and Information Requests.

You must submit a copy of the full response to:

Sara Froikin
Stationary Source Enforcement Branch
Air Enforcement Division
U.S. Environmental Protection Agency
SARA's ADDRESS

Katie McClintock
EPA Region 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101

Regional contact

Commented [FS1]: We should confirm it should come to me, and not go to Greg, since I'm physically in NY now. If it comes to me, my address is:
290 Broadway, 16th Floor
New York, NY 10007

Commented [KM2]: Should I just represent oeca here. I would love to get a copy and I think it makes sense in the short term for me to be the person the companies consult on technical questions on the 114.

Commented [FS3R2]: Agree you should get a copy. For non-R10 facilities, would make sense to list you as OECA/AED.

Commented [KM4]: Having them send to everyone means we don't have to transmit cbi.

Failure to provide the required information in a timely manner may lead to civil action to obtain compliance or to recover a civil penalty in accordance with Section 113 of the CAA, 42 U.S.C. § 7413. EPA also has authority to seek criminal penalties from any person who knowingly makes any false statement, representation, or certification. Even if you fully comply with this letter, you may still be subject to administrative, civil, or criminal action as provided by the CAA.

You are entitled to assert a claim of business confidentiality, covering all or any required information, in the manner described at 40 C.F.R. § 2.203(b). See Enclosure 3 for instructions on assertion of business confidentiality claims. Note that emissions data, which includes information necessary to determine the identity, amount, frequency, concentration, or other characteristics (to the extent related to air quality) of emission data, is not entitled to confidential treatment. Information subject to a claim of business confidentiality will be made available to the public only in accordance with the procedures set forth at 40 C.F.R. Part 2, Subpart B. Unless a confidentiality claim is asserted at the time the required information is provided, EPA may make this information available to the public without further notice to you.

This required submission of information is not subject to the approval requirements of the Paperwork Reduction Act of 1980, 44 U.S.C. §§ 3501, et seq.

Any technical questions regarding this Information Request should be directed to Katie McClintock, Office of Civil Enforcement, at (206) 553-2143, mcclintock.katie@epa.gov; for legal matters, contact Sara Froikin, Office of Civil Enforcement, at (202) 564-5805, [202-564-5805](tel:202-564-5805) or froikin.sara@epa.gov.

Sincerely,

Phillip A. Brooks, Director
Air Enforcement Division

Enclosures (3)

cc: regional contact
Katie McClintock, EPA
Sara Froikin, EPA

ENCLOSURE 1

A. INSTRUCTIONS:

- 1) Please provide a separate narrative response to each Information Request and subpart of an Information Request set forth in Enclosure 2 of this Information Request and precede each answer with the number of the Information Request to which it corresponds.
- 2) For each Information Request, identify each person responding to any Information Request contained in this Information Request on your behalf, as well as each person consulted in the preparation of a response.
- 3) For each Information Request, identify each document consulted, examined, or referred to in the preparation of the response or that contains information responsive to the Information Request, and provide a true and correct copy of each such document if not provided in response to another specific Information Request. Indicate on each document produced in response to this Information Request the number of the Information Request to which it corresponds.
- 4) If requested information or documents are not known or are not available to you at the time of your response to this Information Request, but later become known or available to you, you must supplement your response to EPA. Moreover, should you find at any time after submission of your response that any portion is or becomes false, incomplete, or misrepresents the facts; you must provide EPA with a corrected response as soon as possible.
- 5) Requested information can be submitted in electronic form if applicable.

For purposes of this Information Request, the definitions set forth in Section B shall apply and should be considered carefully by you in preparing your responses.

B. DEFINITIONS:

- 1) "Document" means written documentation of any kind, including documentation solely in electronic form. It includes any document in the possession or control of Kokomo Opalescent Glass or the possession or control of any person or entity hired by Kokomo Opalescent Glass. A copy of a document rather than the original may be provided.

Commented [F55]: Change to "acting as an agent of"?

- 2) "Facility" means the Kokomo Opalescent Glass facility in Kokomo, Indiana.
- 3) The terms "person" or "persons" shall have the meaning set forth in Section 302(e) of the Act, 42 U.S.C. § 7602(e), and include an individual, corporation, partnership, association, State, municipality, political subdivision of a State, and any agency, department, or instrumentality of the United States and any officer, agent or employee thereof.
- 4) The terms "you" or "your", as used above and in each Information Request set forth in Enclosure 2 of this Information Request, refer to, and shall mean, Kokomo Opalescent Glass, including its subsidiaries, divisions, affiliates, predecessors, successors, assigns, and its former and present officers, directors, agents, employees, representatives, attorneys, consultants, accountants and all other persons acting on its behalf.

ENCLOSURE 2

INFORMATION REQUEST

You are hereby required, in accordance with Section 114(a) of the Act, 42 U.S.C. § 7414(a), to provide the following information regarding the Facility.

1. Provide a facility plot plan or diagram of the Facility and a narrative description of the each glass manufacturing process conducted at the Facility. Both should include, but are not be limited to, all sources of emissions to the atmosphere, each glass melting furnace, batch mixing, pollution control devices, glass sheet reheating, annealing lehrs, frit processing, and other units that support glass production. Do not include electric kilns in a studio for work with finished glass product.
2. Provide a narrative description to accompany the above facility diagram including the entire process from the receipt of raw materials to the crushing of finished glass.
3. Provide a list of each glass melting furnace currently operating at the Facility.
4. For each furnace identified in response to Question 3, provide the following information:
 - a. The type of the furnace (e.g., regenerative, recuperative, oxyfuel, electric);
 - b. A schematic of the furnace including the tank size, burner position and exhaust points;
 - c. A description of the furnace operation including how often the furnace is cooled down to ambient temperatures;
 - d. For furnaces that pull glass out continuously, provide:
 - i. The maximum pull of the furnace (tons/hr);
 - ii. The holding capacity of the furnace (lbs);
 - iii. The maximum pull of the furnace (tons/yr);
 - e. For furnaces that melt glass in a batch process, provide:
 - i. The maximum holding capacity of the furnace (lbs);
 - ii. The maximum and minimum times between the start of two consecutive melts.
 - iii. The calculated maximum annual production (tpy) and explanation of the calculation;
5. Annual production (tpy) from each furnace for the last 5 years.

Commented [FS6]: Want to be more specific than just "the process", but not sure this is just right technically.

Commented [FS7]: Do we mean each stack? Perhaps "all points of emission" is better than sources? Or all equipment feeding emissions to an emissions point? "Sources" seems vague.

Commented [FS8]: Is this redundant with the ask in qu 1? When we say the process", can we be more specific?

Commented [FS9]: Is this a clear term? I thought last week I'd picked up that "continuously" can mean two somewhat different things (regarding whether this means the furnace is always hot, or always full of glass, or something like that), but I could have gotten that wrong.

I that we said "pull glass out continuously" – I take it that clarifies. Do we really mean that glass is constantly coming out of the furnace?

Commented [KM10]: Not about nsr, just want an idea of normal throughput. We still won't get an idea of more max capacity unless we go back per 2008.

6. Provide a copy of the current air permit for the facility (if applicable) and the engineering support document.
7. A list of all raw materials used at the facility in the last 3 years and the material safety data sheet (MSDS) for each.
8. Provide purchase invoices for all compounds containing chromium, cadmium, arsenic, nickel and lead for the past 3 years.
9. A complete list of all batch recipes that the company has made in the last 3 years.
10. Daily batch records for the last year. For each batch indicate the date and furnace number as well as the complete ingredient list and quantity.
11. For each furnace identified in response to question 3, provide:

Commented [FS11]: Why nickel and lead as well?

Commented [FS12]: What are we looking to get? If we ask for a list of recipes, we might get things like "recipe 326, recipe 618." Do we want the recipes themselves? Their internal name and list of ingredients w/o amounts?

Commented [KM13]: A sense of historic emissions.

- a. An explanation of how raw materials are charged into the furnace;
- b. The fuel fired in each the furnace and the maximum combined firing rate (mmbtu/hr) combined for the burners in the furnace.
- c. The amount of electricity used to melt glass, if used.
- d. The date the furnace began operation;
- e. Any dates after 1986 that the Furnace was converted from air to oxyfuel, enlarged in size, or modified to increase air emissions. Provide the date of the project, a description of the project, and the effect on emissions and production.
- f. The dates of the last rebricking on the furnace.
- g. A list of all instances in the last 5 years when An explanation of whether the furnace has been cooled to ambient temperature for a reason other than maintenance, malfunction, control device installation, reconstruction or rebuilding in the last 5 years. If so explain the date, the reason, and the length of time the furnace was at ambient temperature.

Commented [FS14]: Is there a unit for this? Do we mean their total electric bill, so to speak, or the amount of electricity per ton of glass, or something else?

Commented [KM15]: Batch melters don't use because they wouldn't stay submerged.

Commented [KM16]: Part 61 subpart N date

12. For each furnace identified in response to question 3, identify and describe any combustion or post-combustion emission control equipment or practices that are used for any reason. For each, provide the following information and provide data to support the answers:

- a. The reason the equipment was installed, the date of the installation and the pollutant(s) the equipment is designed to reduce.
- b. Describe in detail how each emission control equipment or reduction practice limits air emissions from each source, and how effectively (in terms of removal efficiency, capture efficiency, distribution efficiency, etc.) each air emission is limited by the corresponding equipment or practice.
- c. Any engineering documents for the control device regarding related to the emissions reduction performance of the controls device.
- d. Any engineering documents for the any capture system associated with the control device.

Commented [FS17]: I'm assuming this is the kind of performance we're interested in.

Commented [FS18]: What do we mean here by capture system?

- e. If there is any monitoring of the device (temperature, pressure, etc) that is a parameter for performance, provide the source test establishing the parameter and the last year of records of that parameter.

13. Is the facility subject to Part 61, Subpart N? If so, provide the following records for the last two years:

- a. Annual emissions of arsenic from each furnace.
- b. All records required under 40 C.F.R. § 61.165.

14. Is the facility subject to Part 63, Subpart SSSSSS? If no furnaces are subject, explain for each why it is not subject. For any units that are subject provide a copy of the notifications required under 40 C.F.R. § 63.11456 and the last two years of records required under 40 C.F.R § 63.11457.

15. For raw material handling, provide a schematic of the batch mixing setup including the original batch mixing, mixing of the colorants, transfer of the batch to the blender, blending of the batch, transfer of the batch out of the blender, and charging the raw materials into the furnace. For each point, provide an explanation of any air pollution capture system, flow rates if known, and any design of the rooms/air system to limit dust creation. For each collection system, provide the total flow rates for each intake and the design flow rate of the system.

16. Does the Facility crush glass to sell as frit or for other disposal? If yes, provide a detailed schematic of the crushing operation. For each point of emissions in the process, provide an explanation of any air pollution capture efforts at that point including an explanation and drawing of the capture system. If the frit process is enclosed in any larger room, explain how this is done, openings to the larger factory and whether the room exhaust is vented to a control device. For the collection system, provide the total flow rates for each intake and the design flow rate of the system.

17. Does the facility spray any coatings on the glass? If so, describe the process in detail (including a detailed description of the process step where the coatings are applied), the chemicals sprayed along with their Material Safety Data SheetsMSDSs, the process step where the coatings are applied, the quantity of each chemical used each year for the last 3 years, a description of emissions from the process (including a description of any visible emissions during coating) and a description of any emissions capture/control system.

18. For each baghouse, explain what is done with the baghouse dust. If the dust is melted onsite, explain where it is stored before melting, which furnace it is melted in, the frequency of the melting and what is done with the glass after melting.

19. Provide copies of each stack emissions test conducted on each furnace or baghouse stack since 1990. This request includes tests done to determine compliance with permits or regulatory standards, engineering tests, and tests for general information. Provide the batch records for all glasses made in furnaces, routed into the furnace, or batches mixed/blended that were routed into the baghouse.

Commented [FS19]: Do we mean to ask for these records for during the time each test was done, or just generally?

Also, we asked for daily batch records much earlier, so I'm not exactly sure what we're asking here (other than to ask for the batches being run during each test).

20. Provide information on the refractory the Facility uses in their furnaces, both for the tanks of the furnaces and the superstructure. If the Facility uses different refractory in different furnaces, provide information on the refractory products used in each furnace. For each refractory, provide the MSDS from the manufacturer and an invoice. If the facility uses the same refractory in each tank and superstructure, provide invoices since January 1, 2014.

21. For each furnace that measures temperature inside of the furnace, provide:

- a. The point where the temperature is measured;
- b. Temperature readings for the last year (on the frequency recorded) in spreadsheet format.

Commented [FS20]: Word choice? Do we mean "and"? Or do we mean something else?

ENCLOSURE 3

CONFIDENTIAL BUSINESS INFORMATION ASSERTION AND SUBSTANTIATION REQUIREMENTS

A. Assertion Requirements

You may assert a business confidentiality claim covering all or part of the information requested in response to this information request, as provided in 40 C.F.R. Section 2.203(b). You may assert a business confidentiality claim covering such information by placing on (or attaching to) the information you desire to assert a confidentiality claim, at the time it is submitted to the EPA, a cover sheet, stamped, or typed legend (or other suitable form of notice) employing language such as "trade secret" or "proprietary" or "company confidential." Allegedly confidential portions of otherwise non-confidential documents should be clearly identified, and may be submitted separately to facilitate identification and handling by the EPA. If you desire confidential treatment only until a certain date or until the occurrence of a certain event, the notice should so state. Information covered by such a claim will be disclosed by the EPA only to the extent, and by means of the procedures, set forth in Section 114(c) of the Clean Air Act (the Act) and 40 C.F.R. Part 2. The EPA will construe the failure to furnish a confidentiality claim with your response to the attached letter as a waiver of that claim, and the information may be made available to the public without further notice to you.

B. Substantiation Requirements

All confidentiality claims are subject to the EPA verification in accordance with 40 C.F.R. Part 2, subpart B. The criteria for determining whether material claimed as confidential is entitled to such treatment are set forth at 40 C.F.R. Sections 2.208 and 2.301, which provide, in part, that you must satisfactorily show that you have taken reasonable measures to protect the confidentiality of the information and that you intend to continue to do so; that the information is not and has not been reasonably obtainable by legitimate means without your consent; and the disclosure of the information is likely to cause substantial harm to your business's competitive edge.

Pursuant to 40 C.F.R. Part 2, subpart B, the EPA may at any time send you a letter asking you to substantiate fully your CBI claim. If you receive such a letter, you must provide the EPA with a response within the number of days set forth in the EPA request letter. Failure to submit your comments within that time would be regarded as a waiver of your confidentiality claim or claims, and the EPA may release the information. If you receive such a letter, the EPA will ask you to specify which portions of the information you consider confidential. You must be specific by page, paragraph, and sentence when identifying the information subject to your claim. Any information not specifically identified as subject to a confidentiality claim may be disclosed without further notice to you. For each item or class of information that you identify as being subject to CBI, you must answer the following questions, giving as much detail as possible, in accordance with 40 C.F.R. 2.204(e):

1. What specific portions of the information are alleged to be entitled to confidential treatment? For what period of time do you request that the information be maintained as confidential, until a certain date, until the occurrence of a specified event, or permanently? If the occurrence of a specific event will eliminate the need for confidentiality, please specify that event.
2. Information submitted to the EPA becomes stale over time. Why should the information you claim as confidential be protected for the time period specified in your answer to question #1?
3. What measures have you taken to protect the information claimed as confidential? Have you disclosed the information to anyone other than a governmental body or someone who is bound by an agreement not to disclose the information further? If so, why should the information still be considered confidential?
4. Is the information contained in any publicly available material such as the Internet, publicly available databases, promotional publications, annual reports, or articles? Is there any means by which a member of the public could obtain access to the information? Is the information of a kind that you would customarily not release to the public?
5. Has any governmental body made a determination as to the confidentiality of the information? If so, please attach a copy of the determination.
6. For each category of information claimed as confidential, explain with specificity why release of the information is likely to cause substantial harm to your competitive position. Explain the specific nature of those harmful effects, why they should be viewed as substantial, and the causal relationship between disclosure and such harmful effects. How could your competitors make use of this information to your detriment?
7. Do you assert that the information is submitted on a voluntary or a mandatory basis? Please explain the reason for your assertion. If you assert that the information is voluntarily submitted information, explain whether and why disclosure of the information would tend to lessen the availability to the EPA of similar information in the future.
8. Any other issue you deem relevant.

Please note that emission data provided under Section 114 of the Act, 42 U.S.C. Section 7414, is not entitled to confidential treatment under 40 C.F.R. Part 2, subpart B.

Emission data means, with reference to any source of emission of any substance into the air:

(A) Information necessary to determine the identity, amount, frequency, concentration, or other characteristics (to the extent related to air quality) of any emission which has been emitted by the source (or of any pollutant resulting from any emission by the source), or any combination of the foregoing;

(B) Information necessary to determine the identity, amount, frequency, concentration, or other characteristics (to the extent related to air quality) of the emissions which, under an applicable standard or limitation, the source was authorized to emit (including, to the extent necessary for such purposes, a description of the manner and rate of operation of the source); and

(C) A general description of the location and/or nature of the source to the extent necessary to identify the source and to distinguish it from other sources (including, to the extent necessary for such purposes, a description of the device, installation, or operation constituting the source).

40 C.F.R. Sections 2.301(a)(2)(i)(A), (B) and (C).

If you receive a request for a substantiation letter from the EPA, you bear the burden of substantiating your confidentiality claim. Conclusory allegations will be given little or no weight in the determination. If you fail to claim the information as confidential, it may be made available to the public without further notice to you.

Kokomo –

Adjust 114 based on 12 pot furnace and poor raw materials handling. They use bichromate.

<https://www.youtube.com/watch?v=LRUqZDi306E>

This 2011 video shows:

- No dust capture on mixing batch. No dust protection on workers.
- Color is added to glass using a variety of metals including “cadmium and bichromate.”

<https://www.youtube.com/watch?v=tDyeiePort0>

- This facility has an odd 12-pot furnace. It has 12 clay pots inside but is heated commonly. No idea how it works inside.
- I think they may have a few traditional furnaces as well based on one of the videos with the current owner.
- It makes a double size sheet of glass per each roll compared to uroboros and bullseye (but looks like only running one annealing lehr).
- Poor condition of refractory. Since doesn’t contact glass, they could use a variety of refractories, including chromium. Not sure how the head is added in here but clearly a lot of heat is getting to the external refractory:

<https://www.youtube.com/watch?v=KaUtexpYcOo>

Only 300 sheets a day from the 12 pot furnace

<https://www.youtube.com/watch?v=Gxkw5KfQezo>

Review of the other glass companies: 2/15/16

Enforcement Confidential, pre-decisional

The Big Players in the Color Glass Industry:

- Bullseye Glass Company – Portland, OR
- Uroboros Glass – Portland, OR
- Spectrum Glass Company – Woodinville, WA
 - System 96 – Woodinville, WA (collab btwn spectrum and uroboros)
- Kokomo Opalescent Glass – Kokomo, IN
- The Paul Wissmach Glass Company – Paden City, WV
- Youghiogheny Opalescent Glass company – Connellsville, PA
- Armstrong Glass – Kennesaw, GA

Other information:

- The concern here is ambient impacts at sustained high levels. As a result, the facility surroundings are important both in terms of residences but also schools where a larger population is spending many hours a day near the facilities.
 - Bullseye, Kokomo, Youghiogheny, Armstrong – All in neighborhoods with very close houses. Bullseye is very close to schools. Haven't investigated others.
 - Uroboros and Spectrum are a little farther from houses, but both are within a quarter mile of a school.
 - Wissmach seems to be about a half mile from anything.

Completed/ongoing actions:

- Region 10 has inspected Uroboros and Bullseye and will inspect Spectrum/System 96 on Wednesday 2/17. We have requested records from each regarding raw material usages, temperatures, and refractories.
- Uroboros and Bullseye have suspended use of cadmium, arsenic and hexavalent chromium.

Next steps:

- Decide how to investigate. Options include (in order of what I recommend):
 - Phone calls by EPA – Potential for very effective quick source of information but is not traditional. Could allow us to request msds, learn about controls, and understand facility/furnace design.
 - Inspections by EPA – Could be effective. Would be most effective if Zach Hedgpeth and Katie McClintock could go to compare based on what we know of other factories however Regional staff could go after conference calls with Region 10 staff.
 - Information Request – This could be combined with other efforts. Potentially after a phone conversation. A draft is attached. If we only send this, will take a while for the company to gather information and we will get less of a good picture of the process from words only.
 - Inspections by State – This could be useful but the states probably know very little about this and may not want to get caught up in this in the first step.
- Ambient monitoring –

Review of the other glass companies: 2/15/16

Enforcement Confidential, pre-decisional

- Deploying ambient monitoring as soon as possible if they are available would allow EPA to act appropriately and respond to any community concerns. OR has developed ambient monitoring plans that we could probably work from.
 - Especially relevant for trivalent chromium raw materials where there is little literature on the percent conversion in the furnace temperature/atmosphere.
- Other concerns –
 - OSHA – dust handling can raise issues. Kokomo's 2011 video was very concerning, but many years have passed.
 - Soil sampling. Soil samples have been positive in Portland.
 - RCRA and Water issues have come up in the past at Spectrum.

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

John O'Donnell
CEO
Kokomo Opalescent Glass
1310 South Market Street
Kokomo, IN 46902

Re: Supplemental Request to Provide Information Pursuant to Section 114 of the Clean Air Act

Dear Mr. O'Donnell,

The enclosed supplemental information request is being issued to you pursuant to Section 114 of the Clean Air Act (CAA), 42 U.S.C. § 7414. The Environmental Protection Agency is seeking additional information concerning Kokomo Opalescent Glass' facility in Kokomo, IN.

Under Section 114 of the CAA, EPA is authorized to require the submission of records, reports, and other information for the purpose of determining whether any violations of the CAA have occurred. In accordance with this authority, you are hereby served the enclosed Information Request, and required to provide the requested responses and documents within seven (7) days of receipt of this Request for questions 1-8. Provide the remaining responses within (30) days of receipt of this Request. See Enclosures 1 and 2 for the instructions, definitions, and Information Requests.

You must submit a copy of the full response to:

Sara Froikin
Stationary Source Enforcement Branch
Air Enforcement Division
U.S. Environmental Protection Agency
SARA's ADDRESS

Katie McClintock
EPA Region 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101

Regional contact

Commented [KM1]: Should I just represent oeca here. I would love to get a copy and I think it makes sense in the short term for me to the person the companies consult on technical questions on the 114.

Commented [KM2]: Having them send to everyone means we don't have transmit cbi.

Failure to provide the required information in a timely manner may lead to civil action to obtain compliance or to recover a civil penalty in accordance with Section 113 of the CAA, 42 U.S.C. § 7413. EPA also has authority to seek criminal penalties from any person who knowingly makes any false statement, representation, or certification. Even if you fully comply with this letter, you may still be subject to administrative, civil, or criminal action as provided by the CAA.

You are entitled to assert a claim of business confidentiality, covering all or any required information, in the manner described at 40 C.F.R. § 2.203(b). See Enclosure 3 for instructions on assertion of business confidentiality claims. Note that emissions data, which includes information necessary to determine the identity, amount, frequency, concentration, or other characteristics (to the extent related to air quality) of emission data, is not entitled to confidential treatment. Information subject to a claim of business confidentiality will be made available to the public only in accordance with the procedures set forth at 40 C.F.R. Part 2, Subpart B. Unless a confidentiality claim is asserted at the time the required information is provided, EPA may make this information available to the public without further notice to you.

This required submission of information is not subject to the approval requirements of the Paperwork Reduction Act of 1980, 44 U.S.C. §§ 3501, et seq.

Any technical questions regarding this Information Request should be directed to Katie McClintock, Office of Civil Enforcement, at (206) 553-2143, mcclintock.katie@epa.gov; for legal matters, contact Sara Froikin, Office of Civil Enforcement, at (202) 564-5805, Froikin.sara@epa.gov

Sincerely,

Phillip A. Brooks, Director
Air Enforcement Division

Enclosures (3)

cc: regional contact
Katie McClintock, EPA
Sara Froikin, EPA

ENCLOSURE 1

A. INSTRUCTIONS:

- 1) Please provide a separate narrative response to each Information Request and subpart of an Information Request set forth in Enclosure 2 of this Information Request and precede each answer with the number of the Information Request to which it corresponds.
- 2) For each Information Request, identify each person responding to any Information Request contained in this Information Request on your behalf, as well as each person consulted in the preparation of a response.
- 3) For each Information Request, identify each document consulted, examined, or referred to in the preparation of the response or that contains information responsive to the Information Request, and provide a true and correct copy of each such document if not provided in response to another specific Information Request. Indicate on each document produced in response to this Information Request the number of the Information Request to which it corresponds.
- 4) If requested information or documents are not known or are not available to you at the time of your response to this Information Request, but later become known or available to you, you must supplement your response to EPA. Moreover, should you find at any time after submission of your response that any portion is or becomes false, incomplete, or misrepresents the facts; you must provide EPA with a corrected response as soon as possible.
- 5) Requested information can be submitted in electronic form if applicable.

For purposes of this Information Request, the definitions set forth in Section B shall apply and should be considered carefully by you in preparing your responses.

B. DEFINITIONS:

- 1) "Document" means written documentation of any kind, including documentation solely in electronic form. It includes any document in the possession or control of Kokomo Opalescent Glass or the possession or control of any person or entity hired by Kokomo Opalescent Glass. A copy of a document rather than the original may be provided.

- 2) "Facility" means the Kokomo Opalescent Glass facility in Kokomo, Indiana.
- 3) The terms "person" or "persons" shall have the meaning set forth in Section 302(e) of the Act, 42 U.S.C. § 7602(e), and include an individual, corporation, partnership, association, State, municipality, political subdivision of a State, and any agency, department, or instrumentality of the United States and any officer, agent or employee thereof.
- 4) The terms "you" or "your", as used above and in each Information Request set forth in Enclosure 2 of this Information Request, refer to, and shall mean, Kokomo Opalescent Glass, including its subsidiaries, divisions, affiliates, predecessors, successors, assigns, and its former and present officers, directors, agents, employees, representatives, attorneys, consultants, accountants and all other persons acting on its behalf.

ENCLOSURE 2

INFORMATION REQUEST

You are hereby required, in accordance with Section 114(a) of the Act, 42 U.S.C. § 7414(a), to provide the following information regarding the Facility.

1. Provide a facility plot plan or diagram of the Facility and a narrative description of the process. Both should include, but are not be limited to, all sources of emissions to the atmosphere, each glass melting furnace, batch mixing, pollution control devices, glass sheet reheating, annealing lehars, frit processing, and other units that support glass production. Do not include electric kilns in a studio for work with finished glass product.
2. Provide a narrative description to accompany the above facility diagram including the entire process from the receipt of raw materials to the crushing of finished glass.
3. Provide a list of each glass melting furnace currently operating at the Facility.
4. For each furnace identified in response to Question 3, provide the following information:
 - a. The type of the furnace (e.g., regenerative, recuperative, oxyfuel, electric);
 - b. A schematic of the furnace including the tank size, burner position and exhaust points;
 - c. A description of the furnace operation including how often the furnace is cooled down to ambient temperatures;
 - d. For furnaces that pull glass out continuously, provide:
 - i. The maximum pull of the furnace (tons/hr);
 - ii. The holding capacity of the furnace (lbs);
 - iii. The maximum pull of the furnace (tons/yr);
 - e. For furnaces that melt glass in a batch process, provide:
 - i. The maximum holding capacity of the furnace (lbs);
 - ii. The maximum and minimum times between the start of two consecutive melts.
 - iii. The calculated maximum annual production (tpy) and explanation of the calculation;
5. Annual production (tpy) from each furnace for the last 5 years.

Commented [KM3]: Not about nsr, just want an idea of normal throughput. We still won't get an idea of more max capacity unless we go back per 2008.

6. Provide a copy of the current air permit for the facility (if applicable) and the engineering support document.
7. A list of all raw materials used at the facility in the last 3 years and MSDS for each.
8. Provide purchase invoices for all compounds containing chromium, cadmium, arsenic, nickel and lead for the past 3 years.
9. A complete list of all batch recipes that the company has made in the last 3 years.
10. Daily bath records for the last year. For each batch indicate the date and furnace number as well as the complete ingredient list and quantity.
11. For each furnace identified in response to question 3, provide:

Commented [KM4]: A sense of historic emissions.

- a. An explanation of how raw materials are charged into the furnace;
- b. The fuel fired in each furnace and the maximum firing rate (mmbtu/hr) combined for the burners in the furnace.
- c. The amount of electricity used to melt glass, if used.
- d. The date the furnace began operation;
- e. Any dates after 1986 that the Furnace was converted from air to oxyfuel, enlarged in size, or modified to increase air emissions. Provide the date of the project, a description of the project, and the effect on emissions and production.
- f. The dates of the last rebricking on the furnace.
- g. An explanation of whether the furnace has been cooled to ambient temperature for a reason other than maintenance, malfunction, control device installation, reconstruction or rebuilding in the last 5 years? If so explain the date, the reason, and the length of time the furnace was at ambient temperature.

Commented [KM5]: Batch melters don't use because they wouldn't stay submerged.

Commented [KM6]: Part 61 subpart N date

12. For each furnace identified in response to question 3, identify and describe any combustion or post-combustion controls that are used for any reason. For each, provide the following information and provide data to support the answers:
 - a. The reason the equipment was installed, the date of the installation and the pollutant(s) the equipment is designed to reduce.
 - b. Describe in detail how emission control equipment or reduction practice limits air emissions from each source, and how effectively (in terms of removal efficiency, capture efficiency, distribution efficiency, etc.) each air emission is limited by the corresponding equipment or practice.
 - c. Any engineering documents for the control device regarding the performance of the controls device.
 - d. Any engineering document for the capture system associated with the control device.
 - e. If there is any monitoring of the device (temperature, pressure, etc) that is a parameter for performance, provide the source test establishing the parameter and the last year of records of that parameter.

13. Is the facility subject to Part 61, Subpart N? If so, provide the following records for the last two years:
 - a. Annual emissions of arsenic from each furnace.
 - b. All records required under 40 C.F.R. § 61.165.
14. Is the facility subject to Part 63, Subpart SSSSSS. If no furnaces are subject, explain for each why it is not subject. For any units that are subject provide a copy of the notifications required under 40 C.F.R. § 63.11456 and the last two years of records required under 40 C.F.R § 63.11457
15. For raw material handling, provide a schematic of the batch mixing setup including the original batch mixing, mixing of the colorants, transfer of the batch to the blender, blending of the batch, transfer of the batch out of the blender, and charging the raw materials into the furnace. For each point, provide an explanation of any air pollution capture system, flow rates if known, and any design of the rooms/air system to limit dust creation. For each collection system, provide the total flow rates for each intake and the design flow rate of the system.
16. Does the Facility crush glass to sell as frit or for other disposal? If yes, provide a detailed schematic of the crushing operation. For each point of emissions in the process, provide an explanation of any air pollution capture efforts at that point including an explanation and drawing of the capture system. If the frit process is enclosed in any larger room, explain how this is done, openings to the larger factory and whether the room exhaust is vented to a control device. For the collection system, provide the total flow rates for each intake and the design flow rate of the system.
17. Does the facility spray any coatings on the glass? If so, describe the process in detail, the chemicals sprayed along with their Material Safety Data Sheets, the quantity of each chemical used each year for the last 3 years, a description of emissions from the process (including a description of any visible emissions during coating) and a description of any emissions capture/control system.
18. For each baghouse, explain what is done with the baghouse dust. If the dust is melted onsite, explain where it is stored before melting, which furnace it is melted in, the frequency of the melting and what is done with the glass after melting.
19. Provide copies of each stack emissions test conducted on each furnace or baghouse stack since 1990. This request includes tests done to determine compliance with permits or regulatory standards, engineering tests, and tests for general information. Provide the batch records for all glasses made in furnaces route into the furnace or batches mixed/blended that were routed into the baghouse.
20. Provide information on the refractory the Facility uses in their furnaces both for the tanks of the furnaces and the superstructure. If the Facility uses different refractory in different furnaces, provide information on the refractory products used in each furnace. For each

refractory, provide the MSDS from the manufacturer and an invoice. If the facility uses the same refractory in each tank and superstructure, provide invoices since January 1, 2014.

21. For each furnace that measures temperature inside of the furnace, provide:
- a. The point where the temperature is measured;
 - b. Temperature readings for the last year (on the frequency recorded) in spreadsheet format.

ENCLOSURE 3

CONFIDENTIAL BUSINESS INFORMATION ASSERTION AND SUBSTANTIATION REQUIREMENTS

A. Assertion Requirements

You may assert a business confidentiality claim covering all or part of the information requested in response to this information request, as provided in 40 C.F.R. Section 2.203(b). You may assert a business confidentiality claim covering such information by placing on (or attaching to) the information you desire to assert a confidentiality claim, at the time it is submitted to the EPA, a cover sheet, stamped, or typed legend (or other suitable form of notice) employing language such as "trade secret" or "proprietary" or "company confidential." Allegedly confidential portions of otherwise non-confidential documents should be clearly identified, and may be submitted separately to facilitate identification and handling by the EPA. If you desire confidential treatment only until a certain date or until the occurrence of a certain event, the notice should so state. Information covered by such a claim will be disclosed by the EPA only to the extent, and by means of the procedures, set forth in Section 114(c) of the Clean Air Act (the Act) and 40 C.F.R. Part 2. The EPA will construe the failure to furnish a confidentiality claim with your response to the attached letter as a waiver of that claim, and the information may be made available to the public without further notice to you.

B. Substantiation Requirements

All confidentiality claims are subject to the EPA verification in accordance with 40 C.F.R. Part 2, subpart B. The criteria for determining whether material claimed as confidential is entitled to such treatment are set forth at 40 C.F.R. Sections 2.208 and 2.301, which provide, in part, that you must satisfactorily show that you have taken reasonable measures to protect the confidentiality of the information and that you intend to continue to do so; that the information is not and has not been reasonably obtainable by legitimate means without your consent; and the disclosure of the information is likely to cause substantial harm to your business's competitive edge.

Pursuant to 40 C.F.R. Part 2, subpart B, the EPA may at any time send you a letter asking you to substantiate fully your CBI claim. If you receive such a letter, you must provide the EPA with a response within the number of days set forth in the EPA request letter. Failure to submit your comments within that time would be regarded as a waiver of your confidentiality claim or

claims, and the EPA may release the information. If you receive such a letter, the EPA will ask you to specify which portions of the information you consider confidential. You must be specific by page, paragraph, and sentence when identifying the information subject to your claim. Any information not specifically identified as subject to a confidentiality claim may be disclosed without further notice to you. For each item or class of information that you identify as being subject to CBI, you must answer the following questions, giving as much detail as possible, in accordance with 40 C.F.R. 2.204(e):

1. What specific portions of the information are alleged to be entitled to confidential treatment? For what period of time do you request that the information be maintained as confidential, until a certain date, until the occurrence of a specified event, or permanently? If the occurrence of a specific event will eliminate the need for confidentiality, please specify that event.
2. Information submitted to the EPA becomes stale over time. Why should the information you claim as confidential be protected for the time period specified in your answer to question #1?
3. What measures have you taken to protect the information claimed as confidential? Have you disclosed the information to anyone other than a governmental body or someone who is bound by an agreement not to disclose the information further? If so, why should the information still be considered confidential?
4. Is the information contained in any publicly available material such as the Internet, publicly available databases, promotional publications, annual reports, or articles? Is there any means by which a member of the public could obtain access to the information? Is the information of a kind that you would customarily not release to the public?
5. Has any governmental body made a determination as to the confidentiality of the information? If so, please attach a copy of the determination.
6. For each category of information claimed as confidential, explain with specificity why release of the information is likely to cause substantial harm to your competitive position. Explain the specific nature of those harmful effects, why they should be viewed as substantial, and the causal relationship between disclosure and such harmful effects. How could your competitors make use of this information to your detriment?
7. Do you assert that the information is submitted on a voluntary or a mandatory basis? Please explain the reason for your assertion. If you assert that the information is voluntarily submitted information, explain whether and why disclosure of the information would tend to lessen the availability to the EPA of similar information in the future.
8. Any other issue you deem relevant.

Please note that emission data provided under Section 114 of the Act, 42 U.S.C. Section 7414, is not entitled to confidential treatment under 40 C.F.R. Part 2, subpart B.

Emission data means, with reference to any source of emission of any substance into the air:

(A) Information necessary to determine the identity, amount, frequency, concentration, or other characteristics (to the extent related to air quality) of any emission which has been emitted by the source (or of any pollutant resulting from any emission by the source), or any combination of the foregoing;

(B) Information necessary to determine the identity, amount, frequency, concentration, or other characteristics (to the extent related to air quality) of the emissions which, under an applicable standard or limitation, the source was authorized to emit (including, to the extent necessary for such purposes, a description of the manner and rate of operation of the source); and

(C) A general description of the location and/or nature of the source to the extent necessary to identify the source and to distinguish it from other sources (including, to the extent necessary for such purposes, a description of the device, installation, or operation constituting the source).

40 C.F.R. Sections 2.301(a)(2)(i)(A), (B) and (C).

If you receive a request for a substantiation letter from the EPA, you bear the burden of substantiating your confidentiality claim. Conclusory allegations will be given little or no weight in the determination. If you fail to claim the information as confidential, it may be made available to the public without further notice to you.

From: McClintock, Katie
Location: katie call sara 212-637-3263
Importance: Normal
Subject: check in on colored glass
Start Date/Time: Tue 2/16/2016 5:00:00 PM
End Date/Time: Tue 2/16/2016 6:00:00 PM

To: Froikin, Sara[Froikin.Sara@epa.gov]
From: McClintock, Katie
Sent: Wed 3/2/2016 5:25:55 PM
Subject: RE: R4 inspecting colored glass tomorrow

Thanks. I was on the phone when he called but thanks to your email was able to email him. We have connected him and I sent some documents to them.

From: Froikin, Sara
Sent: Wednesday, March 02, 2016 7:41 AM
To: McClintock, Katie <McClintock.Katie@epa.gov>; Fried, Gregory <Fried.Gregory@epa.gov>
Subject: R4 inspecting colored glass tomorrow

Hi Katie and Greg – Dick Dubose just called me with some questions, and mentioned that they're planning to go inspect Armstrong Glass tomorrow. Katie, I recommended he give you a call first to learn from your experience in the past few weeks. If you're already in the office, maybe give him a call. Or he might be calling you right now.

Sara Froikin, Attorney-Advisor

U.S. Environmental Protection Agency

290 Broadway

New York, NY 10007

Phone: 212-637-3263

To: Froikin, Sara[Froikin.Sara@epa.gov]
From: McClintock, Katie
Sent: Tue 2/23/2016 4:14:29 AM
Subject: RE: Colored Glass 114 Draft

Yes, I heard about that too. I think the conversations were between the head of Oregon DEQ and EPA and I'm guessing odeq will apply significant pressure for us to send 114s right away. I am very curious to hear the outcome. Keep me posted on anything you hear.

Thanks.

From: Froikin, Sara
Sent: Monday, February 22, 2016 1:08 PM
To: McClintock, Katie <McClintock.Katie@epa.gov>; Fried, Gregory <Fried.Gregory@epa.gov>; Breneman, Sara <breneman.sara@epa.gov>; Dubose, Dick <DuBose.Dick@epa.gov>; Russo, Todd <Russo.Todd@epa.gov>; Maldonado, Zelma <Maldonado.Zelma@epa.gov>; Schaufelberger, Daniel <schaufelberger.daniel@epa.gov>; Prentice, Dakota <prentice.dakota@epa.gov>; Buettner, Robert <Buettner.Robert@epa.gov>; Spagg, Beverly <Spagg.Beverly@epa.gov>; Salazar, Matt <Salazar.Matt@epa.gov>; Sims, Mark <Sims.Mark@epa.gov>; Brahmbhatt, Roshni <brahmbhatt.Roshni@epa.gov>; Patel, Harish <Patel.Harish@epa.gov>
Subject: RE: Colored Glass 114 Draft

Hi Folks,

Greg and I just heard that there may be some discussion with the Administrator regarding 114s for colored glass, so for anyone who was planning to send one out, please hold off actually sending it out the door until we hear back any thoughts the Administrator has on the matter. I think we'd hear within a couple days.

Thanks,

Sara Froikin, Attorney-Advisor

U.S. Environmental Protection Agency

290 Broadway

New York, NY 10007

Phone: 212-637-3263

From: McClintock, Katie

Sent: Friday, February 19, 2016 11:22 PM

To: McClintock, Katie <McClintock.Katie@epa.gov>; Fried, Gregory <Fried.Gregory@epa.gov>; Breneman, Sara <breneman.sara@epa.gov>; Dubose, Dick <DuBose.Dick@epa.gov>; Russo, Todd <Russo.Todd@epa.gov>; Maldonado, Zelma <Maldonado.Zelma@epa.gov>; Schaufelberger, Daniel <schaufelberger.daniel@epa.gov>; Prentice, Dakota <prentice.dakota@epa.gov>; Buettner, Robert <Buettner.Robert@epa.gov>; Spagg, Beverly <Spagg.Beverly@epa.gov>; Salazar, Matt <Salazar.Matt@epa.gov>; Sims, Mark <Sims.Mark@epa.gov>; Brahmhatt, Roshni <brahmhatt.Roshni@epa.gov>; Patel, Harish <Patel.Harish@epa.gov>; Froikin, Sara <Froikin.Sara@epa.gov>

Subject: FW: Colored Glass 114 Draft

Sorry I have not had a chance to address Sara's comments yet, but here is my draft with her comments/edits.

Let me or Sara know if you have questions.

Katie McClintock

Air Enforcement Officer

EPA Region 10

1200 Sixth Avenue, Suite 900, OCE-101

Seattle, WA 98101

Phone: 206-553-2143

Fax: 206-553-4743

Mcclintock.katie@epa.gov

To: Froikin, Sara[Froikin.Sara@epa.gov]
From: McClintock, Katie
Sent: Mon 2/22/2016 3:10:30 PM
Subject: RE: Anchor scheduling

I'm heading down to Portland in about 30 min. As such I might have to skip the 10 am call. Do you think you could brief them? I need to talk to Spectrum and I had moved them to 11 but I need to grab lunch before my noon meeting. Let me know if this works.

As to anchor, set something up for Thursday. I'll make it work.

From: Froikin, Sara
Sent: Monday, February 22, 2016 5:57 AM
To: McClintock, Katie <McClintock.Katie@epa.gov>
Subject: Anchor scheduling

Hi Katie – I'd like to schedule a team meeting for Anchor to discuss their offer. Would you have time to talk for 30 min or an hour either this Thursday or Monday? I can find a slot looking at the calendars, but wanted to check and see if you'll have time at all, since I know generally every minute of your day is spoken for these days. I know you're drowning in color glass, but I don't want Anchor to sit around too long.

Thanks!

Sara Froikin, Attorney-Advisor

U.S. Environmental Protection Agency

290 Broadway

New York, NY 10007

Phone: 212-637-3263

Company	City	State	Region	Notes
These appear to be the big ones				
Bullseye Glass Company	Portland	Oregon	10	
Urobos Glass	Portland	Oregon	10	
Spectrum Glass Company	Woodinville	Washington	10	
System 96	Woodinville	Washington	10	collaboration btwn Urobos and Spectrum
Kokomo Opalescent Glass	Kokomo	Indiana	5	
The Paul Wissmach Glass Company (Wissmach)	Paden City	West Virginia	3	12 furnaces and one forming line.
Youghiogheny Opalescent Glass Company	Connellsville	Pennsylvania	3	stained glass sheets and glass products
Armstrong Glass	Kennesaw	Georgia	4	stained glass, float glass, and fusing glass
Potentials				
Pacific Art Glass	Gardena	California	9	make mostly clear flat glass but make several darker shades and some look greenish
Blenko Glass	Milton	West Virginia	3	make colored glass things, vases, etc. Blow and pull the glass so much smaller quantities because they have to work it
Stueben	Corning	New York	2	makes clear specialty glass. Possible it is leaded. Investigate more.
Northstar Glassworks	Portland	Oregon	10	borosilicate color - make mostly rod and tube. Not sure if gas melters or size.

dichroic glass

<http://www.cbs-dichroic.com/faq.asp>

They don't make the glass (they use frit), but they coat with metals (in a vacuum despotiion chamber), not sure what hap

Converting from trivalent to hexavalent chromium

<http://asterionstc.com/2014/09/hexavalent-to-trivalent-and-back-to-hex/>

<http://www.pyrometallurgy.co.za/InfaconX/048.pdf> - large discussion about how to reduce conversion in slag. When sla

people buy chromium oxide (trivalent) to use with glazes - who knows about conversion

<http://www.theceramicshop.com/store/product/353/Chromium-Oxide-by-the-lb/>

some glazes use frit.

Most plants look like they stopped using chromium in 90s. Winchester Ardagh used as recently as 2011, reported 201 lbs
http://iaspub.epa.gov/enviro/tri_formr_v2.fac_list/tri_formr.fac_list?rptyear=2011&facopt=dcn&fvalue=131120937118

According to glass packaging institute, all green is from chromium (III). Would a company have to report chromium III in
<http://www.gpi.org/learn-about-glass/what-glass/glass-colorization>
however then discusses oxidized and non oxidized colors.

http://www.lehigh.edu/imi/teched/GlassProcess/Lectures/Lecture04_Shelby_ColoredGlass.pdf
this lehigh presentation says use iron for glass
though it goes on to say chromium is added to make other shades of green.

; released to air (don't know if trivalent or hex)
4&fac_search=fac_beginning

tri?

Chro
betw
of tri
yello
by re
prod

mium - green in soda lime glasses due to balance
green yellow green of hexavalent ions and emerald
valent ions. Highly oxidized glass are an unpleasant
w green. Reduction of hexavalent content is obtained
duction by atmosphere or use of a reducing agent
uce more attractive color.

e
l green
ant
ined
it to

To: Froikin, Sara[Froikin.Sara@epa.gov]
From: McClintock, Katie
Sent: Tue 2/16/2016 3:24:30 PM
Subject: Colored Glass 114 Draft
Colored Glass 114 Draft.docx

Slightly modified version – had my inspector look at it too.

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

John O'Donnell
CEO
Kokomo Opalescent Glass
1310 South Market Street
Kokomo, IN 46902

Re: Supplemental Request to Provide Information Pursuant to Section 114 of the Clean Air Act

Dear Mr. O'Donnell,

The enclosed supplemental information request is being issued to you pursuant to Section 114 of the Clean Air Act (CAA), 42 U.S.C. § 7414. The Environmental Protection Agency is seeking additional information concerning Kokomo Opalescent Glass' facility in Kokomo, IN.

Under Section 114 of the CAA, EPA is authorized to require the submission of records, reports, and other information for the purpose of determining whether any violations of the CAA have occurred. In accordance with this authority, you are hereby served the enclosed Information Request, and required to provide the requested responses and documents within seven (7) days of receipt of this Request for questions 1-8. Provide the remaining responses within (30) days of receipt of this Request. See Enclosures 1 and 2 for the instructions, definitions, and Information Requests.

You must submit a copy of the full response to:

Sara Froikin
Stationary Source Enforcement Branch
Air Enforcement Division
U.S. Environmental Protection Agency
SARA's ADDRESS

Katie McClintock
EPA Region 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101

Regional contact

Commented [KM1]: Should I just represent oeca here. I would love to get a copy and I think it makes sense in the short term for me to the person the companies consult on technical questions on the 114.

Commented [KM2]: Having them send to everyone means we don't have transmit cbi.

Failure to provide the required information in a timely manner may lead to civil action to obtain compliance or to recover a civil penalty in accordance with Section 113 of the CAA, 42 U.S.C. § 7413. EPA also has authority to seek criminal penalties from any person who knowingly makes any false statement, representation, or certification. Even if you fully comply with this letter, you may still be subject to administrative, civil, or criminal action as provided by the CAA.

You are entitled to assert a claim of business confidentiality, covering all or any required information, in the manner described at 40 C.F.R. § 2.203(b). See Enclosure 3 for instructions on assertion of business confidentiality claims. Note that emissions data, which includes information necessary to determine the identity, amount, frequency, concentration, or other characteristics (to the extent related to air quality) of emission data, is not entitled to confidential treatment. Information subject to a claim of business confidentiality will be made available to the public only in accordance with the procedures set forth at 40 C.F.R. Part 2, Subpart B. Unless a confidentiality claim is asserted at the time the required information is provided, EPA may make this information available to the public without further notice to you.

This required submission of information is not subject to the approval requirements of the Paperwork Reduction Act of 1980, 44 U.S.C. §§ 3501, et seq.

Any technical questions regarding this Information Request should be directed to Katie McClintock, Office of Civil Enforcement, at (206) 553-2143, mcclintock.katie@epa.gov; for legal matters, contact Sara Froikin, Office of Civil Enforcement, at (202) 564-5805, Froikin.sara@epa.gov

Sincerely,

Phillip A. Brooks, Director
Air Enforcement Division

Enclosures (3)

cc: regional contact
Katie McClintock, EPA
Sara Froikin, EPA

ENCLOSURE 1

A. INSTRUCTIONS:

- 1) Please provide a separate narrative response to each Information Request and subpart of an Information Request set forth in Enclosure 2 of this Information Request and precede each answer with the number of the Information Request to which it corresponds.
- 2) For each Information Request, identify each person responding to any Information Request contained in this Information Request on your behalf, as well as each person consulted in the preparation of a response.
- 3) For each Information Request, identify each document consulted, examined, or referred to in the preparation of the response or that contains information responsive to the Information Request, and provide a true and correct copy of each such document if not provided in response to another specific Information Request. Indicate on each document produced in response to this Information Request the number of the Information Request to which it corresponds.
- 4) If requested information or documents are not known or are not available to you at the time of your response to this Information Request, but later become known or available to you, you must supplement your response to EPA. Moreover, should you find at any time after submission of your response that any portion is or becomes false, incomplete, or misrepresents the facts; you must provide EPA with a corrected response as soon as possible.
- 5) Requested information can be submitted in electronic form if applicable.

For purposes of this Information Request, the definitions set forth in Section B shall apply and should be considered carefully by you in preparing your responses.

B. ::

- 1) "Document" means written documentation of any kind, including documentation solely in electronic form. It includes any document in the possession or control of Kokomo Opalescent Glass or the possession or control of any person or entity hired by Kokomo Opalescent Glass. A copy of a document rather than the original may be provided.

- 2) "Facility" means the Kokomo Opalescent Glass facility in Kokomo, Indiana.
- 3) The terms "person" or "persons" shall have the meaning set forth in Section 302(e) of the Act, 42 U.S.C. § 7602(e), and include an individual, corporation, partnership, association, State, municipality, political subdivision of a State, and any agency, department, or instrumentality of the United States and any officer, agent or employee thereof.
- 4) The terms "you" or "your", as used above and in each Information Request set forth in Enclosure 2 of this Information Request, refer to, and shall mean, Kokomo Opalescent Glass, including its subsidiaries, divisions, affiliates, predecessors, successors, assigns, and its former and present officers, directors, agents, employees, representatives, attorneys, consultants, accountants and all other persons acting on its behalf.

ENCLOSURE 2

INFORMATION REQUEST

You are hereby required, in accordance with Section 114(a) of the Act, 42 U.S.C. § 7414(a), to provide the following information regarding the Facility.

1. Provide a facility plot plan or diagram of the Facility and a narrative description of the process. Both should include, but are not be limited to, all sources of emissions to the atmosphere, each glass melting furnace, batch mixing, pollution control devices, glass sheet reheating, annealing lehrs, frit processing, and other units that support glass production. Do not include electric kilns in a studio for work with finished glass product.
2. Provide a narrative description to accompany the above facility diagram including the entire process from the receipt of raw materials to the crushing of finished glass.
3. Provide a list of each glass melting furnace currently operating at the Facility.
4. For each furnace identified in response to Question 3, provide the following information:
 - a. The type of the furnace (e.g., regenerative, recuperative, oxyfuel, electric);
 - b. A schematic of the furnace including the tank size, burner position and exhaust points;
 - c. A description of the furnace operation including how often the furnace is cooled down to ambient temperatures;
 - d. For furnaces that pull glass out continuously, provide:
 - i. The maximum pull of the furnace (tons/hr);
 - ii. The holding capacity of the furnace (lbs);
 - iii. The maximum pull of the furnace (tons/yr);
 - e. For furnaces that melt glass in a batch process, provide:
 - i. The maximum holding capacity of the furnace (lbs);
 - ii. The maximum and minimum times between the start of two consecutive melts.
 - iii. The calculated maximum annual production (tpy) and explanation of the calculation;
5. Annual production (tpy) from each furnace for the last 5 years.

Commented [KM3]: Not about nsr, just want an idea of normal throughput. We still won't get an idea of more max capacity unless we go back per 2008.

6. Provide a copy of the current air permit for the facility (if applicable) and the engineering support document.
7. A list of all raw materials used at the facility in the last 3 years and MSDS for each.
8. Provide purchase invoices for all compounds containing chromium, cadmium, arsenic, nickel and lead for the past 3 years.
9. A complete list of all batch recipes that the company has made in the last 3 years.
10. Daily batch records for the last year. For each batch indicate the date and furnace number as well as the complete ingredient list and quantity.
11. For each furnace identified in response to question 3, provide:

Commented [KM4]: A sense of historic emissions.

- a. An explanation of how raw materials are charged into the furnace;
- b. The fuel fired in each furnace and the maximum firing rate (mmbtu/hr) combined for the burners in the furnace.
- c. The amount of electricity used to melt glass, if used.
- d. The date the furnace began operation;
- e. Any dates after 1986 that the Furnace was converted from air to oxyfuel, enlarged in size, or modified to increase air emissions. Provide the date of the project, a description of the project, and the effect on emissions and production.
- f. The dates of the last rebricking on the furnace.
- g. An explanation of whether the furnace has been cooled to ambient temperature for a reason other than maintenance, malfunction, control device installation, reconstruction or rebuilding in the last 5 years? If so explain the date, the reason, and the length of time the furnace was at ambient temperature.

Commented [KM5]: Batch melters don't use because they wouldn't stay submerged.

Commented [KM6]: Part 61 subpart N date

12. For each furnace identified in response to question 3, identify and describe any combustion or post-combustion controls that are used for any reason. For each, provide the following information and provide data to support the answers:
 - a. The reason the equipment was installed, the date of the installation and the pollutant(s) the equipment is designed to reduce.
 - b. Describe in detail how emission control equipment or reduction practice limits air emissions from each source, and how effectively (in terms of removal efficiency, capture efficiency, distribution efficiency, etc.) each air emission is limited by the corresponding equipment or practice.
 - c. Any engineering documents for the control device regarding the performance of the controls device.
 - d. Any engineering document for the capture system associated with the control device.
 - e. If there is any monitoring of the device (temperature, pressure, etc) that is a parameter for performance, provide the source test establishing the parameter and the last year of records of that parameter.

13. Is the facility subject to Part 61, Subpart N? If so, provide the following records for the last two years:
- Annual emissions of arsenic from each furnace.
 - All records required under 40 C.F.R. § 61.165.
14. Is the facility subject to Part 63, Subpart SSSSSS. If no furnaces are subject, explain for each why it is not subject. For any units that are subject provide a copy of the notifications required under 40 C.F.R. § 63.11456 and the last two years of records required under 40 C.F.R. § 63.11457
15. For raw material handling, provide a schematic of the batch mixing setup including the original batch mixing, mixing of the colorants, transfer of the batch to the blender, blending of the batch, transfer of the batch out of the blender, and charging the raw materials into the furnace. For each point, provide an explanation of any air pollution capture system, flow rates if known, and any design of the rooms/air system to limit dust creation. For each collection system, provide the total flow rates for each intake and the design flow rate of the system.
16. Does the Facility crush glass to sell as frit or for other disposal? If yes, provide a detailed schematic of the crushing operation. For each point of emissions in the process, provide an explanation of any air pollution capture efforts at that point including an explanation and drawing of the capture system. If the frit process is enclosed in any larger room, explain how this is done, openings to the larger factory and whether the room exhaust is vented to a control device. For the collection system, provide the total flow rates for each intake and the design flow rate of the system.
17. Does the facility spray any coatings on the glass? If so, describe the process in detail, the chemicals sprayed along with their Material Safety Data Sheets, the process step where the coatings are applied, the quantity of each chemical used each year for the last 3 years, a description of emissions from the process (including a description of any visible emissions during coating) and a description of any emissions capture/control system.
18. For each baghouse, explain what is done with the baghouse dust. If the dust is melted onsite, explain where it is stored before melting, which furnace it is melted in, the frequency of the melting and what is done with the glass after melting.
19. Provide copies of each stack emissions test conducted on each furnace or baghouse stack since 1990. This request includes tests done to determine compliance with permits or regulatory standards, engineering tests, and tests for general information. Provide the batch records for all glasses made in furnaces route into the furnace or batches mixed/blended that were routed into the baghouse.
20. Provide information on the refractory the Facility uses in their furnaces both for the tanks of the furnaces and the superstructure. If the Facility uses different refractory in different furnaces, provide information on the refractory products used in each furnace. For each

refractory, provide the MSDS from the manufacturer and an invoice. If the facility uses the same refractory in each tank and superstructure, provide invoices since January 1, 2014.

21. For each furnace that measures temperature inside of the furnace, provide:
- The point where the temperature is measured;
 - Temperature readings for the last year (on the frequency recorded) in spreadsheet format.

ENCLOSURE 3

CONFIDENTIAL BUSINESS INFORMATION ASSERTION AND SUBSTANTIATION REQUIREMENTS

A. Assertion Requirements

You may assert a business confidentiality claim covering all or part of the information requested in response to this information request, as provided in 40 C.F.R. Section 2.203(b). You may assert a business confidentiality claim covering such information by placing on (or attaching to) the information you desire to assert a confidentiality claim, at the time it is submitted to the EPA, a cover sheet, stamped, or typed legend (or other suitable form of notice) employing language such as "trade secret" or "proprietary" or "company confidential." Allegedly confidential portions of otherwise non-confidential documents should be clearly identified, and may be submitted separately to facilitate identification and handling by the EPA. If you desire confidential treatment only until a certain date or until the occurrence of a certain event, the notice should so state. Information covered by such a claim will be disclosed by the EPA only to the extent, and by means of the procedures, set forth in Section 114(c) of the Clean Air Act (the Act) and 40 C.F.R. Part 2. The EPA will construe the failure to furnish a confidentiality claim with your response to the attached letter as a waiver of that claim, and the information may be made available to the public without further notice to you.

B. Substantiation Requirements

All confidentiality claims are subject to the EPA verification in accordance with 40 C.F.R. Part 2, subpart B. The criteria for determining whether material claimed as confidential is entitled to such treatment are set forth at 40 C.F.R. Sections 2.208 and 2.301, which provide, in part, that you must satisfactorily show that you have taken reasonable measures to protect the confidentiality of the information and that you intend to continue to do so; that the information is not and has not been reasonably obtainable by legitimate means without your consent; and the disclosure of the information is likely to cause substantial harm to your business's competitive edge.

Pursuant to 40 C.F.R. Part 2, subpart B, the EPA may at any time send you a letter asking you to substantiate fully your CBI claim. If you receive such a letter, you must provide the EPA with a response within the number of days set forth in the EPA request letter. Failure to submit your comments within that time would be regarded as a waiver of your confidentiality claim or

claims, and the EPA may release the information. If you receive such a letter, the EPA will ask you to specify which portions of the information you consider confidential. You must be specific by page, paragraph, and sentence when identifying the information subject to your claim. Any information not specifically identified as subject to a confidentiality claim may be disclosed without further notice to you. For each item or class of information that you identify as being subject to CBI, you must answer the following questions, giving as much detail as possible, in accordance with 40 C.F.R. 2.204(e):

1. What specific portions of the information are alleged to be entitled to confidential treatment? For what period of time do you request that the information be maintained as confidential, until a certain date, until the occurrence of a specified event, or permanently? If the occurrence of a specific event will eliminate the need for confidentiality, please specify that event.
2. Information submitted to the EPA becomes stale over time. Why should the information you claim as confidential be protected for the time period specified in your answer to question #1?
3. What measures have you taken to protect the information claimed as confidential? Have you disclosed the information to anyone other than a governmental body or someone who is bound by an agreement not to disclose the information further? If so, why should the information still be considered confidential?
4. Is the information contained in any publicly available material such as the Internet, publicly available databases, promotional publications, annual reports, or articles? Is there any means by which a member of the public could obtain access to the information? Is the information of a kind that you would customarily not release to the public?
5. Has any governmental body made a determination as to the confidentiality of the information? If so, please attach a copy of the determination.
6. For each category of information claimed as confidential, explain with specificity why release of the information is likely to cause substantial harm to your competitive position. Explain the specific nature of those harmful effects, why they should be viewed as substantial, and the causal relationship between disclosure and such harmful effects. How could your competitors make use of this information to your detriment?
7. Do you assert that the information is submitted on a voluntary or a mandatory basis? Please explain the reason for your assertion. If you assert that the information is voluntarily submitted information, explain whether and why disclosure of the information would tend to lessen the availability to the EPA of similar information in the future.
8. Any other issue you deem relevant.

Please note that emission data provided under Section 114 of the Act, 42 U.S.C. Section 7414, is not entitled to confidential treatment under 40 C.F.R. Part 2, subpart B.

Emission data means, with reference to any source of emission of any substance into the air:

(A) Information necessary to determine the identity, amount, frequency, concentration, or other characteristics (to the extent related to air quality) of any emission which has been emitted by the source (or of any pollutant resulting from any emission by the source), or any combination of the foregoing;

(B) Information necessary to determine the identity, amount, frequency, concentration, or other characteristics (to the extent related to air quality) of the emissions which, under an applicable standard or limitation, the source was authorized to emit (including, to the extent necessary for such purposes, a description of the manner and rate of operation of the source); and

(C) A general description of the location and/or nature of the source to the extent necessary to identify the source and to distinguish it from other sources (including, to the extent necessary for such purposes, a description of the device, installation, or operation constituting the source).

40 C.F.R. Sections 2.301(a)(2)(i)(A), (B) and (C).

If you receive a request for a substantiation letter from the EPA, you bear the burden of substantiating your confidentiality claim. Conclusory allegations will be given little or no weight in the determination. If you fail to claim the information as confidential, it may be made available to the public without further notice to you.

To: Froikin, Sara[Froikin.Sara@epa.gov]
From: McClintock, Katie
Sent: Mon 2/15/2016 7:41:41 PM
Subject: your spreadsheet
List of art glass companies - km 2-15.xlsx

Sara –

Here is your spreadsheet and it explains why I removed a few and I have added tabs for the other sleuthing I have been up to this weekend. I'm gonna set up time for us to talk tomorrow morning too but wanted you to see what I have.

Katie McClintock

Air Enforcement Officer

EPA Region 10

1200 Sixth Avenue, Suite 900, OCE-101

Seattle, WA 98101

Phone: 206-553-2143

Fax: 206-553-4743

Mcclintock.katie@epa.gov

Company	City	State
These appear to be the big ones		
Bullseye Glass Company	Portland	Oregon
Urobos Glass	Portland	Oregon
System 96	Woodinville	Washington
Spectrum Glass Company	Woodinville	Washington
Kokomo Opalescent Glass	Kokomo	Indiana
The Paul Wissmach Glass Company (Wissmach)	Paden City	West Virginia
Youghiogheny Opalescent Glass Company	Connellsville	Pennsylvania
Armstrong Glass	Kennesaw	Georgia

can't find anything in ohio, really don't think we are missing anything

unsure yet		
Northstar Glassworks	Portland	Oregon

Think not of interest:		
Jannette Specialty Glass	Jeanette	Pennsylvania
Optimum Art Glass	Eaton	Colorado
Fremont Glass	Seattle	Washington
franklin art glass		

Region

10
10
10
10
5
3
3
4

10

3
8
10

Notes

collaboration btwn Urobos and Spectrum

12 furnaces and one forming line.
stained glass sheets and glass products
stained glass, float glass, and fusing glass

borosilicate color palette

Makes borosilicate glass products, Looks like these guys make only clear glass, so no colors (no metals)
The description I found said they melt 97% recycled post consumer cullet. They do make colored glass, wonder if they ac
Can't find their website, but their glass is listed in an art supply catalog I found them too but probably smaller since no w
doesn't manufacture

ld colorants? If not, thi
ebsite. We could alway

rod and tube glass which was all electricly melted at uroboros due to much smaller quantities than plate

en no metal. Since no website, think likely way too small
ys check them out to get a sense of the small side

<http://wissmachglass.com/thefactory.html>

van gogh glass

Most plants look like they stopped using chromium in 90s. Winchester Ardagh used as recently as 2011, repc
http://iaspub.epa.gov/enviro/tri_formr_v2.fac_list/tri_formr.fac_list?rptyear=2011&facopt=dcn&fvalue=131

According to glass packaging institute, all green is from chromium (III). Would a company have to report chrc
<http://www.gpi.org/learn-about-glass/what-glass/glass-colorization>
however then discusses oxidized and non oxidized colors.

http://www.lehigh.edu/imi/teched/GlassProcess/Lectures/Lecture04_Shelby_ColoredGlass.pdf
this lehigh presentation says use iron for glass
though it goes on to say chromium is added to make other shades of green.

orted 201 lbs released to air (don't know if trivalent or hex)
.1209371184&fac_search=fac_beginning

mium III in tri?

Chromium - green in soc
between yellow green of
of trivalent ions. Highly c
yellow green. Reduction
by reduction by atmosph
produce more attractive

da lime glasses due to balance
hexavalent ions and emerald green
oxidized glass are an unpleasant
of hexavalent content is obtained
ere or use of a reducing agent to
color.

Metals Used to Impart Color to Glass

Cadmium Sulfide	Yellow
Gold Chloride	Red
Cobalt Oxide	Blue-Violet
Manganese Dioxide	Purple
Nickel Oxide	Violet
Sulfur	Yellow-Amber
Chromic Oxide	Emerald Green
Uranium Oxide	Fluorescent Yellow, Green
Iron Oxide	Greens and Browns
Selenium Oxide	Reds
Carbon Oxides	Amber Brown
Antimony Oxides	White
Copper Compounds	Blue, Green, Red
Tin Compounds	White
Lead Compounds	Yellow
Manganese Dioxide	A "decoloring" agent
Sodium Nitrate	A "decoloring" agent

Iron, chromium, and copper all produce different green glass. Chrom

people buy chromium oxide (trivalent) to use with glazes - who knows about conversion

<http://www.theceramicshop.com/store/product/353/Chromium-Oxide-by-the-lb/>

some glazes use frit.

dichroic glass

<http://www.cbs-dichroic.com/faq.asp>

They don't make the glass (they use frit), but they coat with metals (in a vacuum despotiion chamber), not sure what

<http://www3.epa.gov/airtoxics/hlthef/chromium.html>

Uses

The metal chromium is used mainly for making steel and other alloys. (1)

Chromium compounds, in either the chromium (III) or chromium (VI) forms, are used for chrome plating, the manufacture of dyes and pigments, leather and wood preservation, and treatment of cooling tower water. Smaller

The most important industrial sources of chromium in the atmosphere are those related to ferrochrome production. Ore refining, chemical and refractory processing, cement-producing plants, automobile brake lining and catalytic converters for automobiles, leather tanneries, and chrome pigments also contribute to the atmospheric burden of

People who live in the vicinity of chromium waste disposal sites or chromium manufacturing and processing plants have a greater probability of elevated chromium exposure than the general population. These exposures are generally to

1700 chrome platers in us according to earth justice in 2010

63 Subpart N - 1995

<http://www.ecfr.gov/cgi-bin/text-idx?SID=7726c5610053b92e27a7f71399df255d&mc=true&node=sp40.10.63.n&rgn=di>

Earth justice called in 2010 for us to rewrite and cited must better CA rule

<http://www.treehugger.com/corporate-responsibility/epa-goes-easy-on-pollution-from-chrome-plating-facilities-public->

conversion to hexavalent even if you only use trivalent in coating

<http://asterionstc.com/2014/09/hexavalent-to-trivalent-and-back-to-hex/>

who reported in 2014 to TRI and actually reported releases

Columbia steel casting co

sapa inc, coatings division

Bulk Transportation portland terminal (next to apes) came up. Last chromium report was 2005 (253 lbs to air) and arseni

To: Froikin, Sara[Froikin.Sara@epa.gov]
From: McClintock, Katie
Sent: Fri 2/12/2016 9:28:13 PM
Subject: RE: Stained Glass Sourcebook

Might be a good list. Does have franklin (which may or may not be big) and Bullseye. Doesn't include spectrum and uroboros.

From: Froikin, Sara
Sent: Friday, February 12, 2016 1:22 PM
To: McClintock, Katie <McClintock.Katie@epa.gov>
Subject: Stained Glass Sourcebook

Heading out in a minute, but this may be useful for us (around pg 82 at a quick glance), if you haven't already seen it:

<http://www.sgaaonline.com/SB2015-pdf/Sourcebook-2015OE.pdf>

Sara Froikin, Attorney-Advisor

U.S. Environmental Protection Agency

290 Broadway

New York, NY 10007

Phone: 212-637-3263

ART GLASS INSPECTION CHECKLIST

1. General Information

Facility Name _____

Facility Address _____

Facility Contact Name/Title _____

Facility Phone Number _____

2. Does the facility melt any materials that are not already glassified (metal oxides, sand, soda ash, etc) or a high metal oxide containing frit (cad frit or lead frit)? Note: If the facility uses partial cullet and partial other materials, that is still yes. If No, answer the following subquestions and conclude the inspection, if Yes go to the next section.

a. Describe the material used for the process (frit, glass bars, pillows, sheets) and the process involved in the design of the stained or colored glass (fusing, melting, etc.)?

b. How much of each material is used on a daily or weekly basis (lbs)?

c. How is the glass melted to work with? Describe the heat source and the temperatures involved. For how long and at what temperature is each piece of glass typically melted?

Glass Manufacturing Section

Commented [F51]: Any value in asking them for records of permits, or documents saying they don't need permits? Or is that better left to a follow-up 114 if we want them?

1. Describe the glass manufacturing process including receipt of raw materials, batch mixing, batch melting, coatings, annealing and any frit processing.
2. Describe the units (furnaces/kilns/pots) used to melt glass.
3. For melting units (referred to as furnaces but includes kilns and pots), provide the following:
 - a. The designation for the furnace.
 - b. The holding size of the furnace (lb).
 - c. Is the furnace a pot furnace (clay pot), a classic furnace (refractory rectangular shape with overfired direct heating) or a kiln (small ceramic lined vessel)?
 - d. For furnaces which are not pots or kiln, answer the following:
 - i. Is glass manufactured on a continuous process or is glass added and removed with each batch?
 - ii. Is the furnace an air-gas or oxygen-gas? If the furnace is oxygen-gas, what date was it converted?
 - iii. Does the furnace have any heat recovery (recuperators or regenerators)? Describe.
 - e. When the furnace was originally constructed? Has the size, shape or operation (oxyfuel, electric, recuperative) been altered since original construction?
 - f. What is the general operating temperature of the furnace? What are the highest and lowest temperatures during a melt?
 - g. Where is the temperature in the furnace measured? Is it recorded?
 - h. Is the furnace empty regularly for more than 2 hours? If so, when and for how long? What temperature is the furnace kept at during these periods?
 - i. Obtain a schematic of the furnace with dimensions.
 - j. Obtain design information on the furnaces that includes holding capacity size and maximum glass flow in tons per hour or tons per year.
 - k. What is the refractory made out of for each furnace?
4. Describe the melting process at the facility including the time for batch charging, number of charges, cook time, labeling/emptying time, and reheat time. If it varies between furnaces describe for the different types.
5. Describe the air pollutants emitted from the process.
6. How much glass product is made per month and per year?
7. Are any other metals (such as cadmium, arsenic, lead, manganese, or nickel) added to the process and, if so, which furnaces receive which metals? For each metal how much is used monthly and annually? Obtain inventory records if possible. Also obtain an msds for any metal used in the furnace.

Commented [F52]: Added these since they're listed in the SSSSSS NESHAP for glass. Not positive they're all used as additives, but can't hurt to ask.

Commented [KM3]: Yes they should be in this list.

8. If chromium is added, is it hexavalent (chromates) or trivalent chromium (chromites)? This should be provided as an MSDS as well under #7.
9. Where do the furnaces exhaust (roof stack, side building vent)?
10. Are there any air emission controls on the dust handling from the raw materials, material unloading, batch mixing or frit processing? If so, review the dust capture system and get information on the baghouses in place and what process streams each baghouse receives. What is done with the dust collected from the baghouse? If it is melted, what is done with the vitrified product?
11. Are there any air emission controls being used on the furnaces? For each unit, describe
 - a. Type of unit (ESP, baghouse)
 - b. List of furnaces exhausted to the baghouse
 - c. Design, flow rate, and, for baghouses only, the type of bags.
 - d. Temperature of the exhaust in the unit
 - e. Parameters monitored and recorded?
 - f. Maintenance schedule for the unit.
 - g. Have there been any performance tests on the unit? If so provide all stack tests.
 - h. What is done with the waste from the baghouse?
 - i. Has any waste analysis been performed on baghouse dust from any of the furnaces and, if so, obtain a copy of the results.
12. Request batch tickets (or similar, like a charge record and formula) for each furnace for the last month.

Inspector Name _____ Date _____

ART GLASS INSPECTION CHECKLIST

1. General Information

Facility Name _____

Facility Address _____

Facility Contact Name/Title _____

Facility Phone Number _____

2. Does the facility melt any materials that are not already glassified (metal oxides, sand, soda ash, etc) or a high metal oxide containing frit (cad frit or lead frit)? Note: If the facility uses partial cullet and partial other materials, that is still yes. If No, answer the following subquestions and conclude the inspection, if Yes go to the next section.

a. Describe the material used for the process (frit, glass bars, pillows, sheets) and the process involved in the design of the stained or colored glass (fusing, melting, etc.)?

b. How much of each material is used on a daily or weekly basis (lbs)?

c. How is the glass melted to work with? Describe the heat source and the temperatures involved. For how long and at what temperature is each piece of glass typically melted?

Glass Manufacturing Section

Commented [F51]: Any value in asking them for records of permits, or documents saying they don't need permits? Or is that better left to a follow-up 114 if we want them?

1. Describe the glass manufacturing process including receipt of raw materials, batch mixing, batch melting, coatings, annealing and any frit processing.
2. Describe the units (furnaces/kilns/pots) used to melt glass.
3. For melting units (referred to as furnaces but includes kilns and pots), provide the following:
 - a. The designation for the furnace.
 - b. The holding size of the furnace (lb).
 - c. Is the furnace a pot furnace (clay pot), a classic furnace (refractory rectangular shape with overfired direct heating) or a kiln (small ceramic lined vessel)?
 - d. For furnaces which are not pots or kiln, answer the following:
 - i. Is glass manufactured on a continuous process or is glass added and removed with each batch?
 - ii. Is the furnace a air-gas or oxygen-gas? If the furnace is oxygen-gas, what date was it converted?
 - iii. Does the furnace have any heat recovery (recuperators or regenerators)? Describe.
 - e. When the furnace was originally constructed? Has the size, shape or operation (oxyfuel, electric, recuperative) been altered since original construction?
 - f. What is the general operating temperature of the furnace? What are the highest and lowest temperatures during a melt?
 - g. Where is the temperature in the furnace measured? Is it recorded?
 - h. Is the furnace empty regularly for more than 2 hours? If so, when and for how long? What temperature is the furnace kept at during these periods?
 - i. Obtain a schematic of the furnace with dimensions.
 - j. Obtain design information on the furnaces that includes holding capacity size and maximum glass flow in tons per hour or tons per year.
 - k. What is the refractory made out of for each furnace?
4. Describe the melting process at the facility including the time for batch charging, number of charges, cook time, ladeling/emptying time, and reheat time. If it varies between furnaces describe for the different types.
5. Describe the air pollutants emitted from the process.
6. How much glass product is made per month and per year?
7. Are any other metals (such as cadmium, arsenic, lead, manganese, or nickel) added to the process and, if so, which furnaces receive which metals? For each metal how much is used monthly and annually? Obtain inventory records if possible. Also obtain an msds for any metal used in the furnace.

Commented [F52]: Added these since they're listed in the SSSSSS NESHAP for glass. Not positive they're all used as additives, but can't hurt to ask.

Commented [KM3]: Yes they should be in this list.

8. If chromium is added, is it hexavalent (chromates) or trivalent chromium (chromites)? This should be provided as an MSDS as well under #7.
9. Where do the furnaces exhaust (roof stack, side building vent)?
10. Are there any air emission controls on the dust handling from the raw materials, material unloading, batch mixing or frit processing? If so, review the dust capture system and get information on the baghouses in place and what process streams each baghouse receives. What is done with the dust collected from the baghouse. If it is melted, what is done with the vitrified product?
11. Are there any air emission controls being used on the furnaces? For each unit, describe
 - a. Type of unit (ESP, baghouse)
 - b. List of furnaces exhausted to the baghouse
 - c. Design, flow rate, and, for baghouses only, the type of bags.
 - d. Temperature of the exhaust in the unit
 - e. Parameters monitored and recorded?
 - f. Maintenance schedule for the unit.
 - g. Have there been any performance tests on the unit? If so provide all stack tests.
 - h. What is done with the waste from the baghouse?
 - i. Has any waste analysis been performed on baghouse dust from any of the furnaces and, if so, obtain a copy of the results.
12. Request batch tickets (or similar, like a charge record and formula) for each furnace for the last month.

Inspector Name _____ Date _____

To: Froikin, Sara[Froikin.Sara@epa.gov]
Cc: Taylor, Kevin[Taylor.Kevin@epa.gov]; Russo, Todd[Russo.Todd@epa.gov]; Dubose, Dick[DuBose.Dick@epa.gov]; Kler, Denis[Kler.Denis@epa.gov]
From: McClintock, Katie
Sent: Fri 3/4/2016 8:46:19 PM
Subject: Re: Art Glass Screening Inspection Checklist

I'm not sure I understand the 2300 degree temp distinction. Where is this coming from? I think electric vs gas furnaces are a more important distinction. I also am not sure why we use the term "heat source." Many furnaces have more than one burner so how would these questions apply? I would recommend structuring around furnaces personally and maybe splitting electric v gas. I'd also ask you about temp in the bag house. I probably have other minor suggestions but can't do during the meeting im in. I think this is a good start. If I have comments later tonight are they worth sending or will this already be out?

Sent from my iPhone

On Mar 4, 2016, at 12:29 PM, Froikin, Sara <Froikin.Sara@epa.gov> wrote:

<image001.gif>

ATTORNEY-CLIENT PRIVILEGED

Also, as Kevin and I just discussed by phone, I recommend tweaking the title of the document to make sure this sounds more like a sharing our experience/some useful thoughts type document rather than a definitive list of questions.

Thanks!

Sara Froikin, Attorney-Advisor

U.S. Environmental Protection Agency

290 Broadway

New York, NY 10007

Phone: 212-637-3263

From: Taylor, Kevin
Sent: Friday, March 04, 2016 2:54 PM

To: McClintock, Katie <McClintock.Katie@epa.gov>; Froikin, Sara <Froikin.Sara@epa.gov>
Cc: Russo, Todd <Russo.Todd@epa.gov>; Dubose, Dick <DuBose.Dick@epa.gov>; Kler, Denis <Kler.Denis@epa.gov>
Subject: RE: Art Glass Screening Inspection Checklist

Sorry for my error. This is the attachment.

Sincerely,



Kevin I. Taylor

Environmental Engineer

U.S. EPA Region 4

Air Enforcement Section, 12th Floor

61 Forsyth Street, S.W.

Atlanta, Georgia 30303

(404) 562-9134

(404) 562-9163 (fax)

Email: taylor.kevin@epa.gov

From: Taylor, Kevin
Sent: Friday, March 04, 2016 1:24 PM
To: McClintock, Katie <McClintock.Katie@epa.gov>; Froikin, Sara <Froikin.Sara@epa.gov>
Cc: Russo, Todd <Russo.Todd@epa.gov>; Dubose, Dick <DuBose.Dick@epa.gov>; Kler, Denis <Kler.Denis@epa.gov>
Subject: Art Glass Screening Inspection Checklist

Katie/Sara,

This is the checklist that Region 4 developed to be used in the field to screen potential art glass facilities. The purpose of the checklist is to determine if activities at a facility have the potential to be a concern to the community and to begin to inventory the types of art glass facilities we have in the region. The checklist has three major parts. The first part of the checklist is used to cover the hobbyist and instructional glass operations that are not distributing or selling product. The second section covers the actual glass manufacturers that have the potential to fall within the scope of our investigation and meet the current 2500°F threshold. The third section is for facilities that fall below the 2500°F temperature threshold but have operations that may be of interest later as we become more knowledgeable about the art glass sector. We intend to forward the checklist to our state and local counterparts in Georgia and North Carolina so that they can use it for the inspections of Origin Glass (Elan Technology) in Georgia and Parramore Glass in North Carolina that are scheduled for Monday or Tuesday of next week. Therefore, please provide any comments, changes or corrections by 4:00 pm today so we can get the final checklist to the Georgia and North Carolina offices before Monday. Of course, if you have any comments, changes or corrections after today, they are still welcome but may not be incorporated into this first wave of investigations.

Thanks again for your support, knowledge and thoughtful consideration.

Sincerely,



Kevin I. Taylor

Environmental Engineer

U.S. EPA Region 4

Air Enforcement Section, 12th Floor

61 Forsyth Street, S.W.

Atlanta, Georgia 30303

(404) 562-9134

(404) 562-9163 (fax)

Email: taylor.kevin@epa.gov

To: McClintock, Katie[McClintock.Katie@epa.gov]; Froikin, Sara[Froikin.Sara@epa.gov]
Cc: Russo, Todd[Russo.Todd@epa.gov]; Dubose, Dick[DuBose.Dick@epa.gov]; Kler, Denis[Kler.Denis@epa.gov]
From: Taylor, Kevin
Sent: Fri 3/4/2016 7:54:01 PM
Subject: RE: Art Glass Screening Inspection Checklist
ART GLASS INSPECTION CHECKLIST.docx

Sorry for my error. This is the attachment.

Sincerely,



Kevin I. Taylor

Environmental Engineer

U.S. EPA Region 4

Air Enforcement Section, 12th Floor

61 Forsyth Street, S.W.

Atlanta, Georgia 30303

(404) 562-9134

(404) 562-9163 (fax)

Email: taylor.kevin@epa.gov

From: Taylor, Kevin
Sent: Friday, March 04, 2016 1:24 PM
To: McClintock, Katie <McClintock.Katie@epa.gov>; Froikin, Sara <Froikin.Sara@epa.gov>
Cc: Russo, Todd <Russo.Todd@epa.gov>; Dubose, Dick <DuBose.Dick@epa.gov>; Kler, Denis <Kler.Denis@epa.gov>
Subject: Art Glass Screening Inspection Checklist

Katie/Sara,

This is the checklist that Region 4 developed to be used in the field to screen potential art glass facilities. The purpose of the checklist is to determine if activities at a facility have the potential to be a concern to the community and to begin to inventory the types of art glass facilities we have in the region. The checklist has three major parts. The first part of the checklist is used to cover the hobbyist and instructional glass operations that are not distributing or selling product. The second section covers the actual glass manufacturers that have the potential to fall within the scope of our investigation and meet the current 2500°F threshold. The third section is for facilities that fall below the 2500°F temperature threshold but have operations that may be of interest later as we become more knowledgeable about the art glass sector. We intend to forward the checklist to our state and local counterparts in Georgia and North Carolina so that they can use it for the inspections of Origin Glass (Elan Technology) in Georgia and Parramore Glass in North Carolina that are scheduled for Monday or Tuesday of next week. Therefore, please provide any comments, changes or corrections by 4:00 pm today so we can get the final checklist to the Georgia and North Carolina offices before Monday. Of course, if you have any comments, changes or corrections after today, they are still welcome but may not be incorporated into this first wave of investigations.

Thanks again for your support, knowledge and thoughtful consideration.

Sincerely,



Kevin I. Taylor

Environmental Engineer

U.S. EPA Region 4

Air Enforcement Section, 12th Floor

61 Forsyth Street, S.W.

Atlanta, Georgia 30303

(404) 562-9134

(404) 562-9163 (fax)

Email: taylor.kevin@epa.gov

ART GLASS INSPECTION CHECKLIST

1. General Information

Facility Name _____

Facility Address _____

Facility Contact Name/Title _____

Facility Phone Number _____

2. Does the facility use heat in the glass process?

If so, describe the heat source(s) (kiln, furnace), the make and model of each heat source and the maximum temperature of each source and the actual temperature used for the process for each source. If no, write a description of what is done at the location for the record and conclude the investigation.

a. Does the facility make, manufacture or design stained or colored glass or stained glass items for distribution or sales?
Yes ____ (Go to **Glass Manufacturing Section**) No ____ (continue below)

b. Does the facility supply stained or color glass for hobbyists or for instructional purposes?

c. Describe the material used for the process (frit, glass bars, etc.) and the process involved in the design of the stained or colored glass (fusing, melting, etc.)?

d. How much material is used on a daily or weekly basis (lbs, gals)?

e. Are any metals added to the process? If yes, what is added and approximately how much?

f. How is the raw material packaged (bulk totes, 1 pound packages, 8 ounce containers, etc.)?

Glass Manufacturing Section

1. Describe the process?
2. Describe the heat source(s) (kiln, furnace), the fuel for the heat source (electric, natural gas), the make, model and age of each heat source, the maximum temperature of each heat source and the actual temperature used for the process for each heat source.
3. If the maximum temperature is below 2300 °F, go to the **Low Temperature Glass Manufacturing** section.
4. For melting furnaces operating above 2300 °F:
 - a. What is the refractory made out of for each furnace?
 - b. Where is the temperature in the furnace measured?
 - c. Are any furnaces using oxyfuel and, if so, when was it converted?
 - d. Is the process continuous, batch or a “continuous batch” operation with the batches run one after another in a continuous sequence without a significant gap of time in between (describe)?
 - e. What is the process for heating and cooling the furnace for each melt if this is similar to a batch or “continuous batch” operation?
 - f. Obtain a schematic of the furnace with dimensions.
 - g. Obtain design information on the furnaces that includes, holding capacity size, maximum glass flow in tons per hour or tons per year.
5. Describe the air pollutants emitted from the process.
6. How much glass product is made per month and per year?
7. Is any chromium added to the process and, if so, which products is it added to, is it hexavalent or trivalent chromium, and how much is added to the process on a daily, weekly or monthly basis?
8. Are any other metals (such as cadmium or arsenic) added to the process and, if so, which products is it added to and how much is added to the process on a daily, weekly or monthly basis?
9. Where do the furnaces exhaust (roof stack, side building vent)?
10. Are there any air emission controls being used and, if so, describe what they are, how they operate and what parameters are used to monitor performance? Also, were the controls tested and, if so, get a copy of any test results.
11. If baghouses are used for controls, in addition to the requests made in question 10, above, please ask for the following:
 - a. Obtain baghouse designs, flow rates and types of bags.
 - b. What units or areas are exhausted through each baghouse.

- c. Has any waste analysis been performed on baghouse dust from any of the furnaces and, if so, obtain a copy of the results.
12. Request records of products run for each furnace for the last month.

Low Temperature Glass Manufacturing

1. Describe the material used for the process (frit, glass bars, etc.) and the process involved in the design of the stained or colored glass (fusing, melting, etc.)?
2. How much material is used on a daily or weekly basis (lbs, gals)?
3. Are any metals added to the process? If yes, what is added and approximately how much?
4. Are there any air emission controls being used and, if so, describe what they are, how they operate and what parameters are used to monitor performance? Also, were the controls tested and, if so, get a copy of any test results.
5. Is the process continuous, batch or a “continuous batch” operation with the batches run one after another in a continuous sequence without a significant gap of time in between (describe)?
6. How is the raw material packaged (bulk totes, 1 pound packages, 8 ounce containers, etc.)?

Inspector Name _____ Date _____

To: Froikin, Sara[Froikin.Sara@epa.gov]
From: McClintock, Katie
Sent: Fri 3/4/2016 7:47:58 PM
Subject: Re: Art Glass Screening Inspection Checklist

I didn't get it either. I thought was just me so I asked him to paste in email so I can read and edit on phone right after he sent. I haven't heard back. I'm on lunch break but don't have much time. Can you try calling him?

Sent from my iPhone

On Mar 4, 2016, at 11:34 AM, Froikin, Sara <Froikin.Sara@epa.gov> wrote:

<image002.gif>

Thanks, Kevin. No attachment came through, though. Can someone try resending it?

Thanks!

Sara Froikin, Attorney-Advisor
U.S. Environmental Protection Agency
290 Broadway
New York, NY 10007
Phone: 212-637-3263

From: Taylor, Kevin
Sent: Friday, March 04, 2016 1:24 PM
To: McClintock, Katie <McClintock.Katie@epa.gov>; Froikin, Sara <Froikin.Sara@epa.gov>
Cc: Russo, Todd <Russo.Todd@epa.gov>; Dubose, Dick <DuBose.Dick@epa.gov>; Kler, Denis <Kler.Denis@epa.gov>
Subject: Art Glass Screening Inspection Checklist

Katie/Sara,

This is the checklist that Region 4 developed to be used in the field to screen potential art glass facilities. The purpose of the checklist is to determine if activities at a facility have the potential to be a concern to the community and to begin to inventory the types of art glass facilities we have in the region. The checklist has three major parts. The first part of the checklist is used to cover the hobbyist and instructional glass operations that are not distributing or selling product. The second section covers the actual glass manufacturers that have the potential to fall within the scope of our investigation and meet the current 2500°F threshold. The third section is for facilities that fall below the 2500°F temperature threshold but have operations that may be of interest later as we become more knowledgeable about the art glass sector. We intend to forward the checklist to our state and local counterparts in Georgia and North Carolina so that they can use it for the inspections of Origin Glass (Elan Technology) in Georgia and Parramore Glass in North Carolina that are scheduled for Monday or Tuesday of next week. Therefore, please provide any comments, changes or corrections by 4:00 pm today so we can get the final checklist to the Georgia and North Carolina offices before Monday. Of course, if you have any comments, changes or corrections after today, they are still welcome but may not be incorporated into this first wave of investigations.

Thanks again for your support, knowledge and thoughtful consideration.

Sincerely,



Kevin I. Taylor

Environmental Engineer

U.S. EPA Region 4

Air Enforcement Section, 12th Floor

61 Forsyth Street, S.W.

Atlanta, Georgia 30303

(404) 562-9134

(404) 562-9163 (fax)

Email: taylor.kevin@epa.gov

To: McClintock, Katie[McClintock.Katie@epa.gov]; Froikin, Sara[Froikin.Sara@epa.gov]
Cc: Russo, Todd[Russo.Todd@epa.gov]; Dubose, Dick[DuBose.Dick@epa.gov]; Kler, Denis[Kler.Denis@epa.gov]
From: Taylor, Kevin
Sent: Fri 3/4/2016 6:24:03 PM
Subject: Art Glass Screening Inspection Checklist

Katie/Sara,

This is the checklist that Region 4 developed to be used in the field to screen potential art glass facilities. The purpose of the checklist is to determine if activities at a facility have the potential to be a concern to the community and to begin to inventory the types of art glass facilities we have in the region. The checklist has three major parts. The first part of the checklist is used to cover the hobbyist and instructional glass operations that are not distributing or selling product. The second section covers the actual glass manufacturers that have the potential to fall within the scope of our investigation and meet the current 2500°F threshold. The third section is for facilities that fall below the 2500°F temperature threshold but have operations that may be of interest later as we become more knowledgeable about the art glass sector. We intend to forward the checklist to our state and local counterparts in Georgia and North Carolina so that they can use it for the inspections of Origin Glass (Elan Technology) in Georgia and Parramore Glass in North Carolina that are scheduled for Monday or Tuesday of next week. Therefore, please provide any comments, changes or corrections by 4:00 pm today so we can get the final checklist to the Georgia and North Carolina offices before Monday. Of course, if you have any comments, changes or corrections after today, they are still welcome but may not be incorporated into this first wave of investigations.

Thanks again for your support, knowledge and thoughtful consideration.

Sincerely,



Kevin I. Taylor

Environmental Engineer

U.S. EPA Region 4

Air Enforcement Section, 12th Floor

61 Forsyth Street, S.W.

Atlanta, Georgia 30303

(404) 562-9134

(404) 562-9163 (fax)

Email: taylor.kevin@epa.gov